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ABSTRACT

This open learning pack is designed to help instructors of information technology courses in Great Britain's further education sector to become effective tutors. The pack consists of four learning modules that are each designed to be completed in 30 hours. The modules consist of an introduction that outlines objectives and lists competencies addressed in the module and sections (units of instruction) that include the following: section objectives, instructional text, and exercises. Topics of the modules and sections are as follows: facilitating learning (how adults learn, approaches to learning, feedback, pace and review, supporting older learners); planning and delivering an initial information technology session; teaching methods and information technology (one-to-one teaching, small group teaching, whole-class teaching, demonstrations); designing and delivering an information technology course (introduction to session planning, learning aids, hints and tips, and two levels of information technology content). Appended is a guide to obtaining accreditation through the Open College Network South East Midlands. (MN)

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Developing skills for information technology tutors

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Alan Clarke, Jackie Essom and Victoria Forty

Developing Skills for Information Technology Tutors

An open learning pack for tutors of Information Technology

Alan Clarke,
Jackie Essom and
Victoria Forty

NIACE
THE NATIONAL ORGANISATION FOR ADULT LEARNING

OPEN COLLEGE NETWORK
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Module 1

Facilitating Learning

Duration: 30 hours

Notes

This module consists of a User Guide and five sections as follows:

- User Guide – 2 hours
- How Adults Learn – 8 hours
- Approaches to Learning – 6 hours
- Feedback – 4 hours
- Pace and Review – 8 hours
- Supporting Older Learners – 2 hours.

By the end of this module, you should be able to:

- understand the pressures and problems experienced by older learners
- adapt and prepare learning material to alleviate the problems experienced by older learners
- identify the different ways in which adults learn
- devise strategies to deal with this
- use different teaching methods
- understand what learning styles are
- identify different learning styles in your teaching groups
- devise strategies for dealing with different learning styles
- understand the purpose of feedback
- know when to give feedback
- know how to give feedback
- understand what is meant by pace
- understand the purpose of reviews
- develop strategies for dealing with both.

Assessment approach

You will be expected to collect evidence of your skill and understanding of this module to form part of your portfolio and learning diary.

User Guide

Duration: 2 hours

Introduction

Notes

Welcome to the Developing Skills for Information Technology Tutors Open Learning Pack. This pack has been designed for tutors who are seeking to support IT Education and Training for groups of adults.

This section explains the nature of the open learning pack and offers advice on how to use it to the greatest effect.

How to tackle the Open Learning Pack

This pack has been developed in a student-centred format, called open learning. Open learning allows you to take responsibility for your own learning and gives you freedom to study and learn in the way which suits you best. It has been designed to allow you to work through it on your own and requires no prior knowledge of teaching IT to adults. This pack is designed primarily for individual study. However, if you wish to achieve the qualification linked to the pack you will need to work with a trained teacher or trainer who will be acting as your local assessor. They will be assessing the evidence you have collected to show you have successfully carried out the practical assignments which form part of the pack. Even if you are not interested in achieving the qualification to obtain the best results from the material we recommend that you work through each assignment.

The material has been designed assuming that you are currently involved or will shortly start to be involved in supporting adults who are learning about information technology. The assignments are mainly focused on carrying out activities with adult learners.

What you will be able to achieve

Notes

The pack is divided into four modules which in turn are broken down into sections. At the beginning of each section there are a number of set objectives. The objectives tell you what you should be able to do after completing each section.

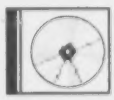
Layout of the material

This pack is not written like a traditional book. If you have a quick look through you will see that there is plenty of room for you to make your own notes so that you can refer back to them at a later date. Three icons are provided to indicate different features of the material.

This icon of a computer indicates the start of the learning material.

This icon of a floppy disk indicates a practical exercise for you to undertake.

This icon of a CD-ROM case indicates references to sources of information which will aid your further learning.



Activities

There are a number of exercises for you to complete, included within each section of this pack. These are designed to help you learn and to enable you to apply it to a classroom situation. You should complete each exercise as you come to it.

Time required

This pack is designed to take approximately 120 hours to complete. Each module will take 30 hours although this will vary according to the speed at which you learn, and the number of sections you decide to complete. It is important to remember when you are using open learning that you are in control of

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your learning so plan your time carefully. It is a good idea to write in a diary or calendar your own schedule of study.

Notes

Your own pace

There are lots of ideas and exercises in the material which you will need to consider and reflect on. Study each section separately as each one contains a number of separate topics. It is important that you make sure that you understand each one before you go on to the next. You should allow yourself plenty of time to work on each section. Do not try to learn too much too quickly.

How long at once?

You need to decide how long you can spend each time you decide to study. Most people prefer to concentrate for 30 to 40 minutes and then have a break. Having a period of time set aside for studying will help you to concentrate and focus on your work.

Where do you start?

It is advised that you start at Module 1. But it is also possible to 'dip' into the guide, to use the sections in which you have greatest interest or desire to learn.

Assessment

As you study this open learning pack you will want to know how you are getting on and whether your knowledge of facilitating IT learning has improved. Assessment is based on you collecting evidence of your skill and understanding of each module to form part of your portfolio and learning diary.

A portfolio can take a variety of forms but we suggest that you obtain a ring binder and dividers. Each piece of evidence (eg examples of material you have written or results of work undertaken with your students) should be filed in the binder and organised with the dividers. You may need to add explanatory notes so that the assessor can understand the relevance and context of the evidence. The portfolio will be assessed by a trained tutor who will act as your assessor.

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A learning diary can take many forms but again a simple clear record is what is required. Use the diary to record your views, ideas and reflections on what you are learning and experiencing in the same way you would keep a diary of your life.

Notes

What about accreditation?

This pack has been designed to support a learner who is taking part in the Developing Skills for Information Technology programme which has been accredited by the Open College Network. Please see the programme for details of the assessment criteria and outcomes.

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Notes

Actions Duration 90 minutes

Before you begin it is useful to undertake some preparations. These are:

- make contact with your tutor who will be supporting you. If you are working on your own then it is useful to identify a colleague who will assist you by considering the outcomes of your exercises and giving you personal feedback

- browse through the whole pack and make yourself aware of the nature of the exercises you will be asked to carry out. The exercises assume you are actively involved in supporting adults learning about IT. It is important to seek permission for carrying out the exercises from both the organisation which is organising the courses and the learners themselves.

- read through the Open College Network programme linked to this material (see Appendix) if you are studying for this award and familiarise yourself with the outcomes and assessment criteria.

- you need to maintain a portfolio of evidence and a learning diary. We suggest that you discuss their structure and standard with your tutor before you begin.

- plan a schedule for yourself and review it after the first week or two to see if it is realistic.

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Section 1. How Adults Learn

Duration: 8 hours

By the end of this section, you should be able to: *Notes*

- identify the different ways in which adults learn
- devise strategies to deal with this
- use different teaching methods.

Swarthmore

Assessment approach

You will be expected to collect evidence of your skill and understanding of this module to form part of your portfolio and learning diary.

As a tutor you will soon realise that the group of adults you are working with all differ in various ways. These differences may be in:

- appearance
- age
- personal circumstances
- educational background
- experience
- expectations
- motivation for learning.

They will also have different ways of learning. What you have to be able to do as a tutor is learn to recognise these ways and help your students learn in the most effective way for them.

Notes

This process may mean helping them to adopt new ways of learning to the ones which they have traditionally been used to.

If you have no understanding of how an adult learns, their progress in the learning process may well be hindered by you, however unintentional it may be on your part. Therefore, in this module, we aim to introduce you to the topic of how adults learn and hopefully help your understanding of the process.

First of all, for effective learning to take place, you should be aware of the following requirements:

- active involvement of the students
- guidance
- motivation
- relevance
- clear goals, aims and objectives
- appropriate methods
- reinforcement of new learning
- effective feedback
- empathy and expertise from the tutor/facilitator
- comfortable learning environment.

Let's start to expand on some of the statements above and give you some ideas you can try in order to help your students learn in a more effective way. (NB Some of the subjects are covered in more detail in other modules.)

Active involvement and guidance

One effective way of learning, indeed some people would consider it to be the *only* way, is learning through actually *doing* something. It is a known fact that learners do tend to remember new learning when they are actively involved in it.

Do you remember how you first learned your own IT skills? Was it from listening to a talk or lecture on the subject or was it from actually practising with a keyboard and computer? More than likely it was the latter method.

In the same way, give your students plenty of opportunities to practise – after all, as the saying goes 'practice makes perfect'. They will learn far more from this hands-on involvement than from listening to an hour's talk on the subject! Your role as tutor will be to circulate around the group

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giving everyone guidance and help in solving problems as they arise.

Notes

Motivation and relevance

If a person is going to learn, they must *want* to learn. You will find that most adults coming to your classes are there by choice because they want to learn rather than *have* to learn (which was so often the case during our schooldays). A motivated student will enjoy their learning and if you can continue to motivate them with your classes, you will see positive results.

One thing that often motivates students is when they can see the relevance of what they are doing and how it can be of benefit to them. Some of your students may be out of work or may be thinking of changing their job, either way they will be aiming to acquire new skills and knowledge which will help improve their 'marketability'. It would be helpful to them if you took some time in the first session to explain the ways in which IT skills will be relevant to them in the 'real world', ie the world of work.

Exercise 1.1.1 Duration 90 minutes

1. List some of the Information Technology applications which might be relevant to your learners.
2. Alongside each application write a short statement explaining why it might be useful to learners (eg help children with their school work).
3. File your report in your portfolio.

Clear goals, aims and objectives

Lesson planning will be looked at more closely in another module but for now it is important to point out to you that you should make sure that your students are aware of the ultimate goals of the IT course. They should be made aware too of the

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aims and objectives of each session, ie what they are going to learn and what they should be able to do by the end of the session. In this way they will have a clearer idea of the goals they are aiming for.

Notes

Appropriate methods

If possible, it is a good idea to try to vary your methods throughout the course. Never lose sight of the fact that you are supporting adults *not* schoolchildren, so try at all costs to avoid using what is known as the 'chalk and talk' method all the time – a method that we all may well remember from our schooldays – nothing will put your students off more quickly than this.

Instead, try to encourage the idea of 'peer teaching', ie where students work in pairs and one student helps another. Often you will find that where you have explained something in a complex and technical way that has not been fully understood by everyone in the class, one student may be able to explain the same thing to another in a much less complicated and more understandable way. The IT classroom is an ideal place for students to work together, so take advantage of this method.

It will probably prove very useful to provide your students with handouts to take away with them after each session in order to remind them of the work they have covered in the session. You need to bear in mind the fact that some learners do tend to have poor short-term memory recall, therefore written handouts would be a good *aide-mémoire* and would help to reinforce their learning between sessions.

We all learn at different rates so it is important that your students should work at their own pace. You may very well find yourself supporting a mixed ability group so try to pitch your pace and language at the right level for your group. At the start of a course, 'Computer Speak' will seem like a foreign language to absolute beginners in IT. Don't lose sight of the fact that you know the subject – they *don't*! It is wrong to plough on regardless and hope that they understand and can keep up with you. You have to allow time for your students to digest and understand new learning. Providing you have plenty of material, you should find it possible for your students to work either as individuals or pairs on different IT exercises according to their abilities and pace.

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Notes

Exercise 1.1.2 Duration 90 minutes

1. Reflect on all the methods which you have experienced in different courses (eg chalk and talk, self-study, workshops, seminars etc) and write a list of possible methods you might use.

2. Alongside your list explain why this would be useful to help adults who are learning about Information Technology.

3. File your report in your portfolio.

Reinforcement

Give your students opportunity to digest and understand the new things they are learning by breaking the lesson down into smaller component parts. The best way is for them to learn 'a little but often'. Make sure they have chance to practise new skills as often as possible so that the learning will 'sink in' and not be forgotten. You will find that it is a good idea to begin each session by re-capping on the previous one. This will be time well spent and will help to reinforce the students' learning.

Effective feedback

Feedback is a vital part of the learning process. Without feedback your students are unlikely to make any improvement and if adults cannot see any improvement in their performance they will soon lose interest and motivation, and without motivation their learning will not be effective.

Your students will want to know what progress they are making. Being experienced in IT, you will be able to see if they have any particular problems, help them to overcome these problems and show them how improvements can be made.

But as with so many things, there are ways and means of giving feedback – the skill is knowing how much to give and when:

- It is the quality of the feedback which counts, *not* the quantity.

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Notes

- Try to ensure that you give your students feedback as soon as possible otherwise they may fall into bad habits.
- Be careful not to criticise your students personally when they have made a mistake. Try to start off by saying something positive to them before going on to point out errors and try always to end on a positive note.
- Wherever possible, try to help your students to solve the problem themselves – don't be tempted to correct everything for them all the time.
- Don't forget, we're all human and like praise and encouragement, so make sure that you give your students plenty of both – it will help to boost their self-esteem and increase their motivation.

It is worth remembering too that feedback is a two-way process. As well as giving feedback to your students, don't be afraid to ask them for their feedback on your sessions. In this way, you can use the information you receive from them to improve the quality of your classes.

Exercise 1.1.3 Duration 90 minutes

1. Reflect on the situations where you were given feedback about your work both on courses, in appraisals and informally.

2. What did you find helpful about the way it was done and how would you improve on the methods used? How would you give feedback and why?

3. Write a short report on your conclusions and file it in your portfolio.

Comfortable learning environment

Your students will enjoy their learning and it will be more effective if the classroom is a comfortable and anxiety-free environment. Try to ensure that your students have comfortable chairs for their workstations and that the temperature in the room is neither too hot nor too cold. It is a good idea for you to arrive at the IT room a few minutes before the session is due to start so that you can check everything is in order.

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Empathy and expertise from the tutor

Notes

Your students will be looking to you for help and guidance and at the outset of the course will probably be totally reliant on you. As the tutor, you will undoubtedly be seen as the 'fount of all knowledge'. But no one can be an expert in everything. The important thing is that you should know your subject as thoroughly as possible and be enthusiastic about it. Enthusiasm is infectious and will rub off on others.

Don't be afraid to make mistakes – they can happen to even the most experienced of tutors. Try to learn from them in the same way that your students will learn from the mistakes they make.

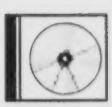
Last but by no means least, try to ensure that learning is *fun*. If your students enjoy their learning, they will be motivated to continue with it and build on it in the future.

Exercise 1.1.4 Duration 2 hours

1. Reflect on your own experience of learning about IT and other subjects.

2. What did you find:
   a) Helpful about the environment? What was good about it and what did you find distracted you?
   b) What was the balance between listening and practising your new skills and knowledge?
   c) What would you do to create a friendly, supportive learning environment?

3. Write a short report on your conclusions and file it in your portfolio.



Further Reading

Howard, M, (1996) *How to Teach Adults*, How to Books, ISBN 1-85703-193-8.

Rogers, J, (1971) *Adults Learning* 3rd edn, Open University Press, ISBN 0-335-09215-2.

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Section 2. Approaches to Learning

Duration: 6 hours

By the end of this section, you should be able to:

Notes

- understand what learning styles are
- consider different approaches to teaching and learning
- identify different learning styles in your groups
- devise strategies for dealing with different learning styles

Assessment approach

You will be expected to collect evidence of your skill and understanding of this module to form part of your portfolio and learning diary.

Adult learners all have their own preferred ways of learning new information and sometimes. For their learning to become more effective, their tutor will introduce them to new ways of learning. A good all-round learner is one who uses a number of different learning styles.

Much has been written over the years on the subject of how adults learn and a great many theories have been put forward – some of which are extremely complicated and would require a degree in psychology to understand them! Therefore in this section we hope to look in a simplified and hopefully more understandable way at the various learning preferences or styles which you may encounter within your group. Learning to recognise these styles will become easier as you gain experience. You will learn to evaluate how effective or ineffective they are for the IT classroom.

Let's begin by giving you some food for thought. There exists an ancient Chinese proverb which goes as follows:

I hear, I forget
I see, I remember
I do, I understand
I think, I learn

Read it through again – very apt, don't you think?

MUD

Notes

As a generalisation you will find that your students will learn by using a combination of the following three learning styles known as MUD:

- **M**emorising
- **U**nderstanding
- **D**oing.

Memorising

Many people will remember rote learning from their schooldays where they had to learn something by heart or 'parrot fashion', such as mathematical tables or conjugating French verbs. Do you remember repetitively chanting them out loud? This method seems to be better suited to younger learners who have better memory recall. As a person ages the short-term memory recall usually declines and they need more time to digest new information. Therefore, you may find it useful to give your students handouts to take away with them to remind them of the main points covered in that session.

Understanding

You may still remember information you learned at school by the rote method but was it ever explained to you and did you really understand it at the time? In the same way, it is no good your students trying to memorise information if they don't fully understand what they are doing and why, otherwise their learning will not be effective. Some of your students will understand new learning points very quickly while others will need more time to digest and understand them. If certain points are not easily understood by your students – try to explain in a different way or even ask one student who has understood to explain to another who hasn't. This is where working in pairs in the IT classroom can be so useful. Try to break your lesson down into smaller component parts so that you don't bombard your students with too much new information in one go and try to re-cap at regular intervals. This will help to reinforce their understanding and learning.

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Doing

Notes

While some learners like to memorise new information, others are more practical and find that their understanding and learning is helped by having a go at doing something. Give your students plenty of opportunity to practise. The IT classroom is an ideal environment for learners to have plenty of hands-on experience. IT is a practical subject which requires considerable practice to master.

Other ways of considering teaching/training approaches are given by:

- **T**ell
- **S**how
- **D**o.

> ***Tell*** The teacher or trainer presents/explains the issues to the group or individual.
>
> ***Show*** The teacher/trainer illustrates the content with visual aids or examples of the material or hardware.
>
> ***Do*** This is essentially the same as the Doing part of MUD. The learner practises the tasks until they become competent.

Another view is given by:

- **T**ell
- **E**xplore
- **F**eedback.

> ***Tell*** This is essentially the presentation of information phase and a combination of the tell and show parts of tell, show and do.
>
> ***Explore*** The learner is encouraged to try things out and explore the situation or equipment. The tutor observes the learners to provide feedback on their performance.
>
> ***Feedback*** The tutor provides feedback on the learners performance.

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Notes

Exercise 1.2.1 Duration 90 minutes

1. Think of a number of everyday activities/skills. For instance:
   - learning a foreign language
   - learning how to swim
   - learning how to use a computer
   - learning to drive a car
   - etc, etc.

2. Reflect about the different approaches to learning given by MUD, Tell, Show and Do etc.

3. Which would be the approach you would choose and why?

4. Record your conclusions in your learning diary.

Types of learner

There is no perfect approach to learning which suits everyone. Each individual has preferences which are often called their learning style. These are automatic responses to dealing with and assimilating information. Individuals will often tell you that they find learning in certain situations difficult. This may be due to the teaching approach not relating to their learning style. There are several ways of describing or categorising learning styles. One way which has attracted interest is presented as two intersecting continua. These are Verbal–Imagery and Holist–Analytical. These different elements reflect how the individual deals with information. It is their automatic reaction to the information.

Holist–Analytic

Holists see information as a whole. They have an overall view of the situation in its context and find it difficult to see any separate parts. In fact, as far as a holist is concerned there are no individual parts. In a learning situation a holist would have difficulty identifying individual components but no problems gaining a balanced view.

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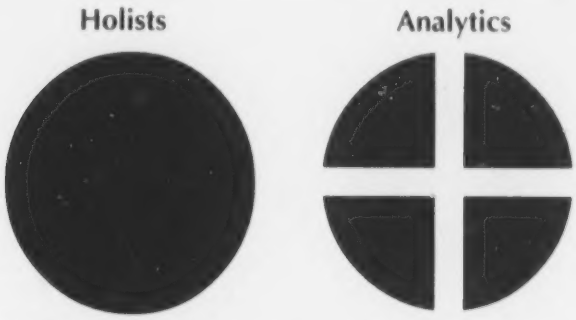

Figure 1.1 *Holists' and Analytics' viewpoints*

Analytical individuals will consider each part separately and this may cause them to exaggerate the importance of individual aspects out of context with the whole. However, they can analyse information which often allows them to quickly see the issues. They are effective at comparing and contrasting the different components.

In a learning environment holists may need help in seeing the component parts while analytics may find discerning the whole difficult.

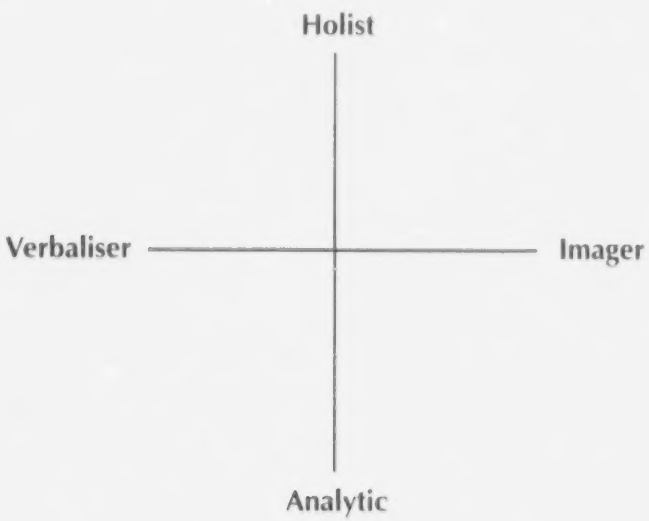

Figure 1.2 *Learning style dimensions*

Verbalisers–Imagers

This dimension represents the way individuals think about the information being presented to them and how they prefer information to be presented to them. Verbalisers prefer to consider information as words while imagers consider information as a mental picture. There are also many individuals who can use either way of representing information.

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Notes

In a learning situation verbalisers may be at a disadavantage in a situation which presents information entirely as images. Imagers equally would be uncomfortable with only information presented as words. Both groups can change their way of considering information. However, it is not their preferred style.

Individuals are a mixture of both dimensions so we have individuals who are:

- Holist–Verbalisers
- Holist–Imagers
- Analytic–Verbalisers
- Analytic–Imagers

with the degree of emphasis varying between the two dimensions.

Another way of considering learning styles is provided by Honey and Mumford. They published their work on preferred learning styles in 1986. During the course of their research they identified four main types of learner, these being:

- Activists
- Reflectors
- Theorists
- Pragmatists

Active learners

These are learners who:

- are motivated and interested
- are enthusiastic and enjoy new experiences
- tend to act first and think later
- enjoy problem-solving
- enjoy learning through games or teamwork
- are easily bored by non-active learning.

Such enthusiastic and motivated learners should be a joy to help. However, you will need to be on your toes to see that they have plenty of hands-on opportunities rather than just giving them lots of information and data. If you dwell on one activity for too long, they may easily become bored and lose interest. They will also not enjoy watching demonstrations for

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Notes

too long or doing too much reading either. Have plenty of exercises for your active learners to do but make sure that they consolidate their learning. It is no good if they keep moving from one new learning point to another if they don't fully understand what they are doing and why.

Reflective learners

These are learners who:

- are good listeners
- like to observe
- examine problems from all viewpoints
- like to have all the information
- think before they act
- may take a long time to reach final conclusions.

You may find that your learners will behave in this way. They like time to think about new information and may appear somewhat cautious or even distant but this doesn't necessarily mean that they are disinterested. It may be that they are taking time to reflect on the new learning experience before they venture an opinion so give them time to do this. Reflective learners may usually prefer to watch a demonstration first before actually having a go themselves.

Theorists

These are learners who:

- like exploring ideas and principles
- like to analyse
- like things to make sense
- think things through in a logical, step-by-step way.

Learners of this type like structured learning activities which follow a logical sequence. They tend to be perfectionists, are keen to produce accurate work and enjoy demonstrations. They will be interested to know just what IT skills can do for them and can be very enquiring. Be prepared for all the questions, eg 'why does this happen in this sequence?', 'That doesn't make sense – why can't I do it this way?'.

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Pragmatists

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These are learners who:

- like to get on with things
- learn by trying out ideas
- are practical and want to know if something works
- enjoy working on real life problems.

You will find that relevance is very important to students of this type. They will want to see if something works and will want to know if their learning links to 'real life' situations in the working environment. Give them plenty of opportunities for practical work. You should be aware, though, that this type of learner may tend to be impatient especially if they feel that the activity they have been asked to do has no clear purpose. Therefore, make sure that you clearly state your aims and objectives at the outset of each session.

From the preceding descriptions you will be able to see that there are strengths and weaknesses in each learning style and no one learning style is necessarily better than another.

Do you recognise any of these learning styles in students you are supporting at the moment?

Exercise 1.2.2 Duration 3 hours

1. Think about the students you have supported or are supporting at the moment.

2. What learning style would you feel they demonstrate and how does it affect their learning? Observe your current group and take notes of their different behaviour and how it relates to learning styles.

3. What could you do to help learners with different learning styles in a practical way?

4. Write a short report on your conclusions and file it in your portfolio.

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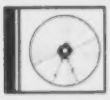

Further Reading

Notes

Further Education Development Agency (1995) *Learning Styles*, Potters

Honey, P and Mumford, A (1986) *The Manual of Learning Styles*, Peter Honey, Maidenhead

Riding, R (1993) *A Trainer's Guide to Learning Design*, Learning Methods Project Report, Department for Education and Employment, OL201

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Section 3. Feedback

Duration: 4 hours

By the end of this section, you should be able to:

Notes

- understand the purpose of feedback
- know when to give feedback
- know how to give feedback.

Drop-in-Centre at Moston Library

Assessment approach

You will be expected to collect evidence of your skill and understanding of this module to form part of your portfolio and learning diary.

What is feedback?

Feedback is information which we provide or receive relating to our analysis of each other's performance.

While planning for or helping with teaching sessions, one very important aspect you will need to think about is giving feedback to your learners on their performance. Giving such feedback is a way of making sure that your students have understood new information in the way that you intended them to and that they can use this information to learn and improve.

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In the following diagram (Figure 1.3) known as Kolb's Learning Cycle you can see that feedback is a very vital part of the learning process:

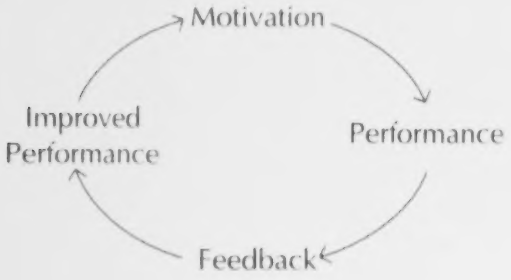

Figure 1.3 *Kolb's Learning Cycle*

Without feedback learners are unlikely to make improvements in their work and if they cannot see any improvements in what they are doing they will soon lose their confidence and motivation. Without this motivation their learning will not be effective.

Learners may be completely new to the subject of Information Technology and, even if they are not complete beginners, they will want to know what progress they are making during the course. With your knowledge and skills in IT you will soon be able to assess their work and see if they have particular problems. You will then be able to suggest ways in which these problems can be overcome and how improvements can be made. As a tutor, your job is to give support to the learners and to ensure that they are competent and ready to move on from one stage of the course or session to the next.

Exercise 1.3.1 Duration 45 minutes

1. Reflect on how you have been given feedback in the past.
2. What ways did you find useful and which ways did you find ineffective or even offensive?
3. Write a list of positive approaches and why you feel they are effective.
4. File your list in your portfolio.

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When and how to give feedback

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Quality feedback

As a tutor you will find that giving feedback is a skill which should improve with experience in delivering it. It requires tact, understanding and respect for others and, on occasions, some courage as it is not always easy to tell someone about their performance particularly if they are not doing too well. The skill is knowing just how to give feedback and when. Bad timing can ruin everything. So can being too verbose – after all, it's the *quality* of feedback that matters, *not* the quantity. However, just as there may be a danger in giving too much feedback, there could also be a danger in giving too little. It's a matter of learning how to strike the happy medium and this will come with more experience.

Immediate feedback

One of the most important things you need to remember when giving feedback to your students is to make sure that you give feedback *as soon as possible*. Don't delay in pointing out where your students are going wrong otherwise they may fall into bad habits which they will later find very difficult to shake off.

Objective feedback

Make sure that your feedback is *objective*. It should not sound as if you are criticising the student personally when they have made a mistake. Remember that some of your students may be lacking in confidence for one reason or another. Therefore, if they feel that you are criticising them personally, this could very well have an adverse effect on their confidence and ultimately on their motivation for learning – so leave them with their self-esteem intact! Try to make sure that you set aside some time in each session so that you can give your students feedback on a regular basis. It might be best if you give feedback on a private one-to-one basis rather than in front of the whole class – this saves any embarrassment for those lacking in confidence. Any general comments to be made on progress could be done with the class as a whole.

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Constructive feedback

Give *constructive* feedback. This means that you should be clear in your comments to your learners – try to avoid being vague otherwise they may be left with the wrong impression of what you are trying to say. Rather than giving generalised feedback try to give specific reasons for why you say a piece of work is good or bad.

Positive feedback

Try to ensure that you start feedback on a *positive* note before you go on to point out any errors your students may have made. Make sure that you end on a positive note too. If students can see that their achievements are being recognised they will feel valued and respected so don't forget to give them plenty of praise and encouragement. This will help to boost their self-image and in turn will increase their motivation.

Sharing ideas

When giving feedback try to avoid giving out advice all the time and try to avoid the temptation of correcting your students' mistakes for them all the time. Instead, try as far as possible to *share ideas* and encourage your students to think for themselves and try to solve problems for themselves. Ask your students open-ended questions rather than closed ones which simply require a yes or no answer. Typical open-ended questions could be:

- 'What do you think about ...?'
- 'What have you learned from ...?'

These will encourage your students to give you more information and will also give you a better idea of whether they have understood the feedback they have been given.

Feedback as a two-way process

It is worth remembering that feedback is a two-way process. As well as giving feedback to your students on their work, don't be afraid to ask your students for their feedback on your teaching sessions (this shouldn't require too much courage on your part if you have established a good rapport with them).

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You can then use this useful information when planning future sessions and it can also be used to improve the quality of your classes.

We have now explained what feedback is and when and how to use it. When giving feedback try to always keep the following key points in mind:

- give feedback as soon as possible
- give objective feedback
- give constructive feedback
- give positive feedback
- use feedback to share ideas
- keep feedback simple.

and most of all remember that:

> Effective feedback is helpful. Ineffective feedback can be destructive.

Exercise 1.3.2 Duration 90 minutes

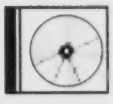
1. Consider how to give feedback and prepare yourself.

2. During your next session try to give appropriate feedback to some or all of the learners.

3. Reflect on how well the feedback was received. Could you have approached the learner in a better way? Was there a more effective way of giving the feedback?

4. Write a short report recording each item of feedback, why you gave it and how it was received.

5. Reflect on your efforts and record them in your learning diary.



Further Reading

Kolb, DA 1984 Experimental Learning: Experience as a Source of Learning and Development, Prentice-Hall, New Jersey.

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Section 4. Pace and Review

Duration: 8 hours

By the end of this section, you should be able to: *Notes*

- understand what is meant by pace
- understand the purpose of reviews
- develop strategies for dealing with both.

Assessment approach

You will be expected to collect evidence of your skill and understanding of this module to form part of your portfolio and learning diary.

Pace

All learners are different and not only vary in their preferred styles of learning but also vary considerably in the pace at which they learn. If your learners cannot keep up with the pace of the session, then you need to be flexible enough to alter your session plans and vary your own speed in order to allow more time to cover certain topics.

Exercise 1.4.1 Duration 30 minutes

1. How would you deal with one or two very fast learners in your class so that they or the rest of your students don't lose their motivation?

2. Record your conclusions in your learning diary.

Many people new to IT find that experienced users often go too quickly for them to understand their explanations. It is

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critical during each session to introduce each topic slowly and systematically. It is very important to check understanding as you move around the room by observing how individuals are proceeding with their exercises or by talking to them.

Don't impose one pace, for example your own, on your group otherwise they will soon lose interest and motivation. Never lose sight of the fact that you already have IT skills – they don't (or maybe only have a limited knowledge) and therefore they will need time to practise and perfect these skills. At the outset of the course, the students who are absolute beginners may well be slowed down by the fact that they do not understand the computer terms you are using, so try to pitch your language at the right level for your group. If you are supporting a mixed ability group and you set the pace to suit the fastest learners in your class, it could very quickly demotivate the rest; likewise, if you set the pace to suit the slowest learners you will demotivate the faster ones. So, how do you overcome this problem?

The answer is that you allow your students to work on different pieces of work at their own pace and according to their abilities. In this way your students will learn more effectively. The IT classroom is an ideal environment for this to be made possible since your students can work as individuals or in pairs where they can help each other, and with you the tutor being there 'on call' to sort out any difficulties as they arise. From your point of view, however, this may well involve you in extra work as you will have to produce more exercises for your students to work on.

Your students will probably not be able to master each new skill immediately but the important thing is to make sure that they perform each skill to the best of their ability – precision and speed will come later with more practice. Usually you will find that adult learners tend to be more concerned with accuracy rather than speed anyway. Learners can become confused and anxious if they feel they are being rushed so be flexible – adjust the time to complete an exercise to what you observe. Slow down or speed up according to the needs of the group. After all, your sessions shouldn't end up being a race or competition to see who can learn the most in the shortest time!

Give your learners plenty of opportunity to practise – people do seem to remember things better when they are actively involved in them. You will probably find that short but frequent practice sessions are much better for your learners rather than long periods spent at their screens which can be tiring (particularly if you are supporting a group in the evening where everyone has been at work all day), cause lapses of concentration and end up by being counter-productive.

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Exercise 1.4.2 Duration 3 hours

1. Consider a topic which you are going to cover and plan how you intend to pace your introduction covering issues such as:
   - presentation
   - exercises
   - feedback
   - review
2. Try it out with a group of your learners.
3. Reflect on how it worked – was it too quick or too slow and why?
4. Record your conclusions in your learning diary and file your plan in your portfolio.

Reviews

As a tutor you need to know what progress your learners are making and if they understand what they are doing. Reviews and feedback are ways of doing this and both play a very important part in the learning process. We have covered the giving and receiving of feedback in a separate module, so in this module we will concentrate on reviews.

Exercise 1.4.3 Duration 30 minutes

1. Reflect on your own experience of receiving reviews and consider what made them effective or ineffective.
2. Record your conclusions in your learning diary.

For learning to be effective, give individuals time to digest and understand new information by breaking the topic down into smaller component parts which should be easily understood and should lead in a logical sequence to the next part – adult learners usually like to see a logical sequence to their courses.

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The IT course should be designed in such a way as to enable students to practise and reinforce their newly acquired skills and knowledge throughout its entirety. Each session should hold frequent opportunities for students to have hands-on practise of new skills and they should also be able to build on skills learnt in earlier sessions.

Exercises 1.4.4 Duration 30 minutes

1. Consider how you could help a student to reinforce their learning.

2. Record your conclusions in your learning diary.

After each new topic has been completed, spend some time in the session on recapping and reviewing the new ground that has been covered (remember to build this time into your lesson plans). You can carry out reviews with your students on an individual basis in the same way that you would give feedback, or you might on occasion want to review certain topics with the group as a whole. Carrying out frequent recapping and reviews will give you a good idea of whether or not your students have understood the new learning points and if they are ready to move on to the next part of the session or course. It also serves the purpose of helping your students to reinforce their learning. Without review and reinforcement their newly acquired skills will soon be forgotten so it is no good racing on from one part to another if your students haven't understood what they have been doing and why.

Take some time at the beginning of each session to recap on the work that was covered in the previous session. This will serve as a good reminder to your students and will again help to reinforce their learning. However, if you find that even after reviewing and recapping your students still do not fully understand certain new learning points, it may be that you need to review your own session plans and methods and modify them accordingly. The wrong pace could be one of the barriers to effective learning as we have seen in the first part of this section.

Reviews and feedback are 2-way processes so don't be afraid to ask your students for their views. You can use the vital information that you receive from them to change your session plans and methods and thus improve the quality of your classes.

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Finally, remember the three 'Rs':

Notes

- Reviewing
- Recapping
- Reinforcement.

Exercise 1.4.5 Duration 3 hours

1. Consider how you would undertake a whole-group review of a topic which would involve your group.

2. Plan your review and carry it out.

3. Reflect on how the review went – what worked well? What could be improved?

4. Record your conclusions in your learning diary and file your preparation notes and materials in your portfolio.

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Section 5. Supporting Older Learners

Duration: 2 hours

By the end of this section, you should be able to:

Notes

- understand the pressures and problems experienced by older learners
- adapt and prepare learning material to alleviate the problems experienced by older learners.

Portslade Older Learner

Assessment approach

You will be expected to collect evidence of your skill and understanding of this module to form part of your portfolio and learning diary.

Older adults and Information Technology

The increased use of information technology both in the home and the workplace has a significant impact on older adults. One of the fastest growing group of Internet users are people over 55 years old while information technology courses are among the most popular taken by older learners.

A lack of IT learning opportunities in the past for older adults may leave them feeling anxious about their ability to learn about IT. However, this is often accompanied by a strong motivation and curiosity about these developments which were not available to them when they were at school. In addition,

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the current and future rate of change in life due to technology may make them cautious, particularly as IT has been embraced with seeming ease by younger people.

Some older adults experience competing demands on their time and energy and therefore might express an intolerance of learning anything which they view as unnecessary. They want to see that the IT content is relevant to them. However, this should not be assumed as meaning that they are not interested in what happens inside the box. Frequently older learners want to know how and why it works.

It is suggested that older people learn to use computers as it can help to:

- diminish social isolation and exclusion
- understand the changes IT is making to society
- contribute to the education of their grandchildren
- provide them with skills they can use in voluntary work
- provide access to services such as tele-shopping and telephone banking.
- provide a source of intellectual exercise, which is needed to maintain intellectual functions.
- increase self-esteem and value of self-worth
- provide them with a method of communication.

Older learners are often strongly motivated to learn about IT.

Age-related problems

Older adults may experience some age-related problems which increase the difficulty of learning IT, for example:

- *Memory*: recalling new material which requires large amounts of memory eg the function keys and keyboard short cuts.
- *Vision*: fine-positioning the mouse pointer and reading instructions on the screen can be difficult for those whose eyesight has deteriorated.
- *Co-ordination and Motor Skills*: older adults may experience problems controlling input devices ie mouse, touch pad, etc. In addition co-ordinating the movement and 'clicking' of the mouse can be difficult.

Teaching older learners Information Technology

Kelley and Charness (1995) state that there is 'no interaction of age and training method, suggesting that what is good for

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younger adults is also good for older adults'. However, older learners sometimes express a preference for learning with other older learners. This appears to provide a more supportive environment for them.

Older learners' reasons for learning about IT are similar to other adults'. Some are simply curious but many have a distinct purpose in mind. Methods which you might consider are:

- *Approach*: instruction should be non-intimidating, and start from the basics to build confidence. You must show the students the value of learning to use a computer before trying to teach them, to increase motivation for the course.
- *Teaching material*: adults prefer to work at their own pace, therefore the use of easy-to-follow handouts and manuals is advised.
- *Reviews*: reviewing the material from the previous week before new learning begins may help learners to put each session in the context of the whole course.
- *Visuals*: basic steps can be taken to alleviate the problems experienced by those with impaired vision, for example producing course material in large print and changing the settings on the computer to large icons and fonts on menu bar.
- *Strategy*: a strategy used by James *et al.* (1996) for teaching older learners word processing was encouraging them to write their life history. This was found to be an activity which older adults enter into enthusiastically.
- *Memory*: you can overcome problems of forgetfulness by making clear notes and handouts available to the members of the class.

These suggestions are probably suitable for learners of all ages.

Exercise 4.5.1 Duration 90 minutes

1. Discuss with your older learners what they have found useful and what they would like to change.
2. Observe your older learners.
3. Reflect on the learners' comments and your observations and consider what are likely to be the most effective approaches.
4. Record your conclusions in your learning diary.

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Further Reading

Notes

James, DTD, Gibson, F, McAuley G and McAuley, J (January–February 1996) Introducing older learners to information technology through life history writing, *International Journal of Lifelong Education*, 15 (1), pp 50–58

Kelley, CL and Charness, N (March–April 1995) Issues in training older adults to use computers, *Behaviour and Information Technology*, 14 (2), pp. 107–19

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Module 2

Planning and delivering an initial IT session

Duration: 30 hours

Notes

This module consists of only one section and concentrates on preparing for the first IT learning session which adult learners will undertake.

By the end of this module, you should be able to:

- understand how adult learners feel in their first IT session
- create a positive learning environment
- treat each learner as an individual
- identify the main objectives of the initial session
- understand the importance of developing independent learners
- understand what constitutes structural knowledge
- assess the suitability of a temporary location
- assess the health and safety risks of a location
- plan the content of an initial IT experience
- carry out the initial IT session.

Volunteer help, Junior School, Crewe

Assessment approach

Notes

You will be expected to collect evidence of your skill and understanding of this module to form part of your portfolio and learning diary. Each exercise contains instructions about where to record evidence that you have completed the task. However, you should also add any other information which will demonstrate your understanding and skill.

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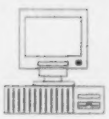
Preparing for the First IT Session

Duration: 30 hours



Take yourself back to the first time you were asked to use a computer. How did you feel? Many adults approach computers with a degree of uncertainty about their ability to use them. They often lack confidence in themselves in relation to information technology. This anxiety comes from many sources but includes the language used to describe technology which is new to many people, sounds different and is hard to understand. Many people have read, heard or seen computers described as vital to the future prosperity of the country and its population. This adds stress to the adults who do not use computers and on whom the pressure begins to mount that they must learn. This is often increased by friends, partners or children who seem to surf the Internet effortlessly and word-process while talking knowledgeably about megabytes, modems and CD-ROMs.

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Many adults find simply attending their first computer event a real challenge in that they feel under considerable pressure to learn to keep up with everyone else while having doubts about their ability to learn. It is vital that these uncertainties are reduced and eliminated. Most learners find using computers interesting, motivating and often exciting in that they soon realise what a computer can do for them.

However, this takes time and at the start it is vital that the learners' confidence is increased and that they feel comfortable.

Exercise 2.1 Duration 60 minutes

1. Ask a group of students who are attending their first IT course how they feel about computers.

2. Write a short report on their feelings and file it in your portfolio.

3. Reflect on what the group told you and consider your own feelings the first time you used a computer. Record your impressions in your learning diary.

Notes

There are a range of methods which you can use to create a positive learning environment. These include:

- laying out the room to encourage learners to talk to each other and making it clear that they can assist each other
- encouraging the learners to play an active part:
  - ask each person to introduce themselves or divide into pairs and ask them to talk to each other for a few minutes and then introduce their partner
  - give each person a name badge or card so that everyone has the opportunity to learn each others' name.
- asking them to explain their reasons for attending. This is often related to (Clarke, 1998):
  - helping their children or grandchildren
  - the fear of being left behind
  - having bought a computer and failed to learn how to use it
  - failing another course
  - making them more employable
  - simple interest and curiosity.

By sharing their feelings with the rest of the group hopefully they will realise that they are not alone. They are among people who have the same problems and doubts as themselves.

Learners are all different

Learners who attend computer or information technology courses have a wide range of previous experience and in many cases are not completely new to computers. It is poor practice to assume that they are all the same. Probably the majority of your learners will have seen a computer before and some will have even used one. They may use them as part of their work. For example, they will enter information from forms into a database but have no knowledge of other computer applications or even what use is made of the data they have input. This type of experience often provides sharp contrasts in that they may be very fast in entering information through a keyboard but have never touch a mouse or switched a computer on or off.

Some people will be trained typists while others will have never used a keyboard. Each will have different problems to overcome. For example, word-processors automatically start a new line while typists use a carriage return to produce a new

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line. This often results in typists pressing "Enter" to force a new line. This takes practice to overcome.

A non-typist who has typists on either side of them will often feel they are falling behind almost immediately so that it is important to emphasise that:

- everyone learns at different speeds so there is no race
- you have a range of exercises available to meet the different abilities and experience of learners.

This problem often occurs at the beginning of a course because it has become very common to start an introduction to computer courses with word-processing. Often this is due to the desire to provide learners with practice in using the keyboard and mouse. However, most applications (eg databases, graphics and the Internet) can allow you to practise using these devices.

The major aims of this early experience are familiarity with:

- layout of the keyboard especially the parts which are different from a conventional typewriter
  - function keys
  - number pads
  - qwerty keys
  - special purpose keys (eg Ctrl, Alt and Enter keys)
- entering information through the keyboard
- how to hold a mouse
- single and double clicking
- clicking and dragging.

There are many ways of introducing beginners to these devices and allowing them to practise them. Some options are:

- Playing games which require manipulation of objects with a mouse (eg Windows 95 Solitaire)
- Painting and drawing packages which allow mouse skills to be practised. Exercises probably need to be provided to give a focus for the learner.
- Spreadsheets which allow information to be input using a keyboard and practice in using a mouse. Exercises probably need to be provided to give a focus for the learner.
- Using an Internet search engine to find sites, which give opportunities to enter text from the keyboard and practice using a mouse.

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- The use of any one of several computer-based learning packages which provide exercises for entering text and practising mouse skills

Exercise 2.2 Duration 3 hours

1. Try out as many of these actions as you are able and any others you can identify.
2. Assess which would help introduce your learners to using the keyboard and mouse.
3. Record your assessment of the actions you tried in your portfolio of evidence

Independent learners

Information technology is in a continuous state of change with new equipment and software being released all the time. It is now normal for new versions of applications such as Microsoft Word to be launched every year or two so that any computer user needs to be able to adapt to new products. This is a permanent feature for the information technology user so it is important that any course of study should aim to develop learners who can:

- transfer their knowledge and skills to new situations
- develop their own understanding of information technology
- become confident enough of their ability to learn that new situations are seen as an opportunity not a threat.

This is not easy but some good practice is to:

- avoid simply concentrating on functional knowledge (eg how to use a particular application)
- include structural or underpinning knowledge and skill (eg directory structures).

Example

Showing individuals where to locate an application in Windows 95 is very useful so long as it emphasises an approach

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which helps the learner understand the structure of the folders and files so that they develop an understanding of how to locate any application.

Locate Word 6 in Windows 95

- Simple functional approach:
  1. From 'Desktop' click on 'My Computer' and select 'C':

  2. A window full of folders appears in alphabetical order which includes a Word 6 folder.

- Structural approach
  1. From 'Desktop' click on 'My Computer'.

  2. A window will open which provides you with access to:
     A: which is the name of the floppy disk drive
     C: which is the internal magnetic hard disk within the computer
     D: which is the CD-ROM drive
     B: is not usually present since it is used for a second floppy disk drive
     The other icons are folders giving you access to the printers and networks attached to the computer as well as the control folder which allows you to change the setting of your computer.

  3. Select 'C': which normally holds most of the applications you will use on the computer.

  4. A window full of folders appears in alphabetical order which includes a Word 6 folder. The presentation of this window can take several forms. If you click on the menu item "View" then you will see four choices of presentation. These are:
     – large icons
     – small icons
     – list
     – details
     Explore the options to see how they change the information displayed.

Which presentation is best for finding Word 6? An effective approach is to take advantage of a need to find Word 6 to show the learners the nature of the directory/folder structure.

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Structural or underpinning knowledge allows you to predict how to do things. For example knowing the hierarchy of the directories allows you to search through them. It allows you to guess where you are likely to find a file or where to save it to. To become an independent learner/user of information technology you require a degree of structural understanding. Without this knowledge the learner will frequently be puzzled by their computer and in doubt about how to do things.

For a new learner you need to achieve a balance between functional and structural content. Functional knowledge tends to be associated with achieving goals (eg accessing a program they want) and is often motivating for the learner while structural knowledge can appear to be theoretical. However, the best approach is to combine the functional and structural aspects so that everything forms a part of an objective the learner is seeking to achieve.

The amount of structural underpinning a new learner needs is difficult to judge but the list below covers some important aspects which must be mastered to achieve independence. They do not all need to be learnt at once and are best integrated into a course of study lasting several weeks.

Structural knowledge

The following activities provide a means of developing structural understanding:

- Start and shut down the computer
- Installing and removing software
- Change system characteristics (mouse buttons, speed of double clicking, background colours and screen savers)
- Create a directory/folder and a sub-directory (understand directory structure)
- move and copy files
- delete files (single and groups of files)
- create a file
- name and rename files
- examine a directory/folder and understand information (size of files, date created etc)
- format a floppy disc
- save files on a floppy, hard disk and network server
- "save as" function
- select printers
- change printer paper
- print a file on a printer

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Notes

Exercise 2.3 Duration 3 hours

1. Consider how you could develop an item of structural understanding with your learners.
2. Prepare to explain, demonstrate or develop exercises for them which will develop their structural understanding.
3. Evaluate your approach by carrying out the exercises
4. Reflect on how successful you have been and record in your learning diary your feelings.
5. Store your preparation and any learning materials or exercises in your portfolio.

Location

Many different types of locations have been successfully used to provide IT courses and events (eg village halls, supermarkets, libraries, schools and community centres). Portable equipment is easy to transport and can be set up in almost any location. You normally need to adapt your approach to the local situation. However, this is a normal feature of any outreach education and training event.

The key issue about any location is that it must be acceptable to the learners or they will not come. Often learners will chose a course based on its location, distance from home and timing of the sessions rather than the contents of the course. For example:

- Primary schools are excellent venues if you want to target the parents of the children who attend the school.
- Community locations tend to attract people who live within walking distance of the site.
- A creche will enable many parents to attend events. However, parents have often got other problems to overcome to enable them to attend a course.

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Some simple tips for undertaking an outreach event include: *Notes*

- Visit the location before the event and check facilities so that you can adapt your approach to the situation
- Arrive in plenty of time on the day of the event so that you can prepare the room and yourself
- Be flexible – do not plan an event which depends on a certain size or shape of room or other facilities
- Be prepared to move the furniture to get the best layout
- Take spare cables, fuses, and other extra equipment. Try to be as independent as you possibly can. You do not want to find yourself unable to carry out a demonstration because of the lack of a fuse
- Use plenty of signs to clearly identify the way to your room
- Start and finish on time. People need to plan their attendance.

Exercise 2.4 Duration 45 minutes

1. Choose a location which is normally not intended for adult learning.
2. Visit the site and assess its suitability as a location and what you would need to change (eg furniture) to adapt it for an IT learning event.
3. Write a short report providing an assessment of the site and recommendations for a successful event (eg extra equipment to bring, changes in approach, layout of room, etc).
4. File your report in your portfolio.
5. Reflect on the experience and record any conclusions you reach about the difficulties of outreach events in your learning diary.

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Health and Safety

Notes

You must provide a safe environment for your learners. At an early stage in preparing for an event or course assess the health and safety aspects of the venue and remove or reduce any risks to your learners and yourself.

Some examples of measures which you can take to create a safe environment include:

Individual space

Each learner should have enough space around them to be comfortable (eg leg room and desk space) and lay out their learning materials (eg exercises, handouts and workbooks). They should be allowed to alter the layout of the keyboard, mouse and monitor. The learners should be able to view their learning materials without having to turn their bodies excessively.

Fire

Make sure everyone is aware of what to do if there is a fire. This should be done at the start of the course.

Seating

Seats should be adjustable and learners should be shown how to adjust the height and backrest to ensure they are comfortable. The learner's lower back needs to be supported by the chair and feet should be able to be placed on the floor with the knees slightly higher than the chair to ensure good circulation of blood.

The height of the chair should allow the learner's eyes to be slightly below the top of the screen. They should view the screen from a distance of at least 18 inches.

Light

The screen should be positioned so that it does not reflect light (ie tilting the screen will reduce reflections and glare). Each learner should individually adjust brightness and contrast of the monitor so that it is right for them. In natural light the monitor should be positioned at a right angle to the window. In artificial light switch off unnecessary lights to reduce glare but do not make the room dark.

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Notes

You can purchase filters which fit over the screen to reduce reflection. However, they also tend to reduce the contrast and legibility of the display so only use a filter if you cannot control reflection any other way.

Food and drink

Prohibit drinking near any equipment to avoid the risk of spilling liquids. Mixing liquids with electrical equipment is very dangerous.

Stress

Using computers can be stressful so organise your sessions so that students take frequent breaks (eg at least a few minutes every hour away from the computer).

Exercise 2.5 Duration 45 minutes

1. Carry out a Health and Safety assessment of any room you use for IT events.
2. Write a short report covering the main health and safety aspects of the room in association with new users and computer equipment including how you would eliminate any hazards.
3. File your report in your portfolio.

Initial session

The first IT experience

The first experience of computers is about the development of confidence in learners that they can learn about information technology. Their first experiences must be positive and allow them to feel they are achieving results. You must provide them with achievable challenges which are relevant to their interests. Check what interests them so you can offer an appropriate objective. Some examples of suitable first goals are:

- using multimedia
- printing a message

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Notes

- changing a spreadsheet
- playing a computer game
- drawing a picture using clipart
- finding a World Wide Web site
- taking part in a computer-based quiz.

The BBC's 'Computers Don't Bite' and 'Webwise' programmes and the Government's 'IT for All' initiative have produced introductory CD-ROMs which can be used to provide a good initial experience.

Your approach should be to make each learner aware of their achievement so that they begin to develop confidence. This can be helped by:

- giving praise when it is deserved
- explaining issues in plain English without using technical terms or jargon or explaining the terms if they cannot be avoided
- encouraging questions and discussion
- allowing learners to explore
- removing any pressure or stress (eg speed of working)
- providing handouts – but encourage them to take their own notes
- encouraging the learners to help each other.

Planning a session

Step 1: Decide on an objective for the session which is suitable for students' needs and expectations, which is challenging but also interesting and fun to do.

Step 2: Break the session down into meaningful parts.

Step 3: Review previous work with students especially if it relates to new area. If it is the first session of a course review their previous experience.

Step 4: Introduce each new area showing why it is important and providing a context for it. Relate it to previous work and if possible to other experiences.

Step 5: Work through each part allowing learners to work at their own pace – provide suitable practice – review individual achievements – provide individual support.

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Step 6: Evaluate session with students. *Notes*

Step 7: Act on the evaluation outcomes in future sessions.

Encouraging participation

Adults will help each other if they are allowed to, so provide reasons for learners to start to talk. For example, a place to get a drink helps them to meet each other and to start to talk.

You can take many actions to encourage communication, mutual support and participation. They include:

- Review previous session by asking the group if everything was clear or if they had any questions or comments.
- Discussion of subject: divide the participants into small groups and ask them to discuss a project. This will help quiet students take part and ensure more whole-class debate.
- Small groups: divide the participants into small groups (2 or 3 people) and ask them to work together to achieve an objective (eg to design an advertising leaflet for the course)
- Ask questions of the whole group or individuals as you walk around the room
- Encourage the learners to ask you questions by making yourself available and approachable.

An IT session should be a lively and exciting place with lots of discussion and individual contributions.

Content

For new computer users you should not under-estimate the challenge they are taking on. The language, ideas and approach may be considerably different from anything they have encountered before. Try to find ways of easing the introduction (eg slowing down the rate of double clicking or using visible mouse trails to help learners find their pointers).

You should introduce each new item systematically and not overburden with too much content at any one time. It is useful to relate information technology concepts to other familiar objects possibly by using analogies.

You need to be flexible to allow for different needs and experience within the group. Do not be too rigid in following

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a lesson plan. You may find that more time is needed for practice or to consolidate new work before going on to the next topic.

Notes

Exercise 2.6 Duration 6 hours

1. Consider your own situation and outline a first session aimed at
   - encouraging mutual support
   - developing confidence
2. In particular consider how you would start a session so that you could immediately begin the process of developing confidence.
3. What will you cover?
4. How will you ensure that learners know they have succeeded?
5. Prepare for the session including notes, materials, exercises etc.
6. Carry out the session.
7. Record your views in your learning diary. What were the strengths and weaknesses of your approach. What would you do differently and why?
8. File your materials and notes for the session in the portfolio.

Further Reading

Clarke, A (1997) *IT Awareness Raising for Adults*, Department of Education and Employment

Clarke, A (1999) *Computing for Adults*, Hodder and Stoughton

Clarke, A (1999), *How to create effective information and communications technology learning programmes*, NIACE

Computers Don't Bite, http://www.bbc.co.uk/education/itc

Computers Don't Bite, *Webwise* and *IT for All* CD-ROMs

IT for All, http://www.itforall.org.uk

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Module 3

Teaching Methods and Information Technology

Duration: 30 hours

Notes

This module consists of four sections and covers some of the main teaching approaches used in IT courses. The four sections are:

- One-to-one teaching – 10 hours
- Small group teaching – 8 hours
- Whole-class teaching – 6 hours
- Demonstrations – 6 hours.

By the end of this module, you should be able to:

- understand the basic techniques which make up one-to-one support
- identify learners who may be having difficulties with a task
- contribute to solving learners' problems
- prepare for individual instruction by analysing and breaking down a task or subject
- carry out individual instruction
- support small groups, using a variety of delivery strategies, such as discussion, brainstorming and buzz groups.
- identify what stage of development applies to your group at any one time.
- develop strategies to deal with a range of different group work situations.
- understand the structure of an effective short presentation or talk
- grade the content of a presentation in order of importance
- understand the importance of your notes
- prepare your notes
- check the location for your talk

- understand how to deliver a talk
- understand the purpose of demonstrations
- carry out a demonstration
- use learner demonstrations to assess their understanding.

Notes

Assessment approach

You will be expected to collect evidence of your skill and understanding of this module to form part of your portfolio and learning diary. Each exercise contains instructions about where to record evidence that you have completed the task. However, you should also add any other information which will demonstrate your understanding and skill.

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Section 1. One-to-One Teaching

Duration: 10 hours

By the end of this section, you should be able to: *Notes*

- understand the basic techniques which make up one-to-one support
- identify learners who may be having difficulties with a task
- contribute to solving learners problems
- prepare for individual instruction by analysing and breaking down a task or subject
- carry out individual instruction.

One-to-one

Assessment approach

You will be expected to collect evidence of your skill and understanding of this module to form part of your portfolio and learning diary.

During any information technology course the students are going to spend a lot of time working on their own since using a computer is essentially an individual task. Good practice is to allow people to progress at their own speed and rapidly over a few sessions the group will spread out. Soon each person will be working on different exercises. Thus, it is important to consider how best you can support individual learning. Volunteers are often used within a computer course to provide one-to-

Notes

one support so it is important to understand the most effective practice to employ.

One-to-one support involves a mixture of skills such as:

- explaining
- demonstrating
- solving problems
- answering questions
- analysis of tasks and issues
- developing relationships.

Exercise 3.1.1 Duration 30 minutes

1. Reflect on your own experiences of learning on your own.
2. How did it feel? What sort of help did you need and how would you have liked to have receive it?
3. Record your conclusions in your learning diary.

Solving problems

One-to-one support comes about in two main ways. You observe that the student is in difficulties or you feel that it is appropriate to introduce the student to a new topic or technique. You will spend a lot of time observing the individual progress students are making by walking around the room and looking over their shoulders. This means that your view is often of people's backs and part of the computer screen. It is therefore not simple to decide if someone has problems unless they ask for help. Students often do not want to show they are having problems while everyone else is getting on with their work. However, from the start of the course it is important to stress that people can ask for help, ask questions and talk to each other. You should stress that people can work at their own pace and it is not a competition.

Exercise 3.1.2 Duration 30 minutes

1. How do you know when someone is having problems?
2. Write a list of things you would look for and record them in your learning diary.

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How do you decide that someone is in trouble? You can look for signs such as:

- learners not inputting any information for a long period (ie a minute or two)
- body language conveying they are puzzled (not easy if they do have their backs to you)
- screen display shows that they are not using the correct application
- referring to the same part of their notes repeatedly
- another student is helping them (do not assume you have to assist. Allow students to help each other and only intervene if it goes on for too long since this indicates that the problem is not being solved)
- deleting the same information more than once
- repeating the same action.

If you are in doubt simply ask the individual how things are going. In most cases, if they have problems they will tell you once you have made it easy for them by speaking first. If they are happy with their progress then nothing is lost. Over a period of a few sessions you will find that you begin to identify those people who need help more accurately as you get to know each person.

Students will ask for help if the climate you have helped create within the class allows them to feel that this is natural. The problems students encounter cover a vast range but some common ones are:

- Accidentally initiating a keyboard shortcut and being puzzled by the result. How did this happen? It is not always obvious to you when all you can see is the effect and the student does not know what caused the changes.
- Opening a new document or window on top of an existing one. The student will often say that they have lost their work or even that they fear they have deleted it.
- Forgetting file names or to where they saved the file.
- Minimising a window by accident. Students will often say they have lost or deleted the window.

You will often be puzzled yourself by what you see on the screen. Your job is to explain why it has happened to the student and correct it. You should get the student to take the corrective action rather than do it for them. You should ideally never touch the keyboard or mouse since the purpose of the

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class is to help the individual learn how to use the computer. In some cases it is useful to share the problem with the whole class. However, do this in a positive way without demeaning the individual student.

Notes

Example

> Janet has spotted an interesting issue which you may find useful to ...

Exercise 3.1.3 Duration 3 hours

1. In an information technology class try to identify learners who are having problems.
2. Use the different approaches described in the tutorial.
3. Reflect on what you observed and record your observations in your learning diary.
4. Reflect on your own actions and record what happened, indicating what you felt worked well and what did not, in your learning diary.
5. Discuss your feeling with your tutor or a colleague and record the discussion in your learning diary.

How to carry out one-to-one instruction

Although one-to-one support is very useful in solving problems it is also a very useful technique to introduce new ideas and areas of work to the students. After two or three sessions, students, working at their own pace, will all be doing different exercises so that you must explain new items on an individual basis.

Individual instruction can involve you in a number of different actions. These include:

- demonstrating new techniques and skills
- providing a detailed explanation

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- giving step-by-step instruction so that the individual student can follow you on the keyboard and mouse
- observing the students' practice
- giving feedback
- discussing.

The key is preparation which allows you to understand, explain and demonstrate the new technique or subject in a way which will aid the learner. This involves you in analysing the technique/subject and breaking it down into meaningful steps. This is best done by actually carrying out the task and making notes of the steps involved. A step should be meaningful but not too big so that the learner does not get knowledge indigestion. Once you have identified the steps take your analysis further by writing down what the key points are within each step. Key points should include structural understanding/underpinning knowledge, health and safety issues and good practice.

It is useful to write your analysis down (see example below) simply because you can re-use the notes many times but also because it can serve as the basis for developing handouts or exercises.

This type of preparation will not only make your instruction effective but also give you confidence in that you have systematically analysed the tasks and techniques. This is potentially very useful when trying to help individuals in difficulties or to understand what error the student has made.

Example

Making the mouse suitable for left-handed learners

Steps	**Key points**
1. Click on 'Start'	1. Pop up menu will appear
2. Select 'Settings'	1. No need to click 2. 'Settings' will highlight once mouse pointer is over the item 3. Menu will appear to right of 'Settings' 4. Move mouse pointer over 'Control Panel'
3. Click on 'Control Panel'	1. A new window will appear – control Panel with many icons 2. Locate Mouse icon

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		Notes
4. Double click on 'Mouse icon'	1. A new window will appear called 'Mouse Properties' 2. Locate radio button labelled 'left mouse button'	
5. Click in radio	1. Exit Windows by clicking button on OK until you return to desktop.	

The approach is to work through the analysis step-by-step. You might demonstrate with the learner watching the first time and then coach them through the sequence of steps while they undertake the task. Emphasise the key points and let them take as much time as they need. Once you are sure the learner understands ask them to have a go without your help while you observe. If they make a mistake ask them to correct it. If it is appropriate ask them to explain what they are doing so that you can check their understanding. You need to continue until you are satisfied. When you leave the learner explain what they should now do. It is good practice to leave them with a task which allows the learner to continue to practise.

Exercise 3.1.4 Duration 3 hours

1. Choose a task or technique such as using tables within a word-processing document.
2. Analyse the task into a series of steps with their associated key points.
3. Show your analysis to your tutor or a colleague and record their comments and a copy of the analysis in your portfolio.
4. Use the analysis to instruct a learner.
5. Reflect on what when well and what did not work as you planned. Record your feeling in your learning diary.

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Section 2. Small Group Teaching

Duration: 8 hours

By the end of this section, you should be able to:

Notes

- support small groups, using a variety of delivery strategies, such as discussion, brainstorming and buzz groups
- identify what stage of development applies to your group at any one time
- develop strategies to deal with a range of different group work situations.

Assessment approach

You will be expected to collect evidence of your skill and understanding of this module to form part of your portfolio and learning diary.

Students will learn a lot from each other as well as from the tutor. One way of developing and encouraging learner interaction is to divide your class into smaller groups. Individuals often feel intimidated in a large group and unable to contribute but working within a small group relieves this stress.

The size of a group can vary considerably. This increases the number and variety of group activities, and allows you to interact in different ways with your learners.

Division of the group

There are many ways you can divide a large group up into a smaller sets. These include:

- Half and half, simply by splitting the group into two.
- Grouping people with those they are sitting next to.
- Put people who don't already know each other together.
- Number people in turn and ask the same numbers to form groups (e.g. 1, 2, 3, 1, 2, 3, etc – all the 1s work together and so on).

Notes

- Ask the members to get into groups with people they especially want to work with.

There is no one right way of forming groups so experiment until you find a way that seems to work for you.

Size

When the number of people in a group increases or decreases it alters the dynamics and the characteristics of a group. The larger the number of people in a group, the greater the possibility of some members having shared aims and ideas. While in smaller groups there is more potential for all the members to take part.

Many tutors consider that skills-based training, such as information technology, is best suited to small groups because there is more time for individuals to practise, with more attention from the instructor. The smaller the group the higher the tutor/participant ratio becomes. It is suggested in *IT Awareness Raising for Adults* (Clarke, 1998) that the ideal tutor-to-student ratio for initial IT sessions is four-to-one. Many learning centres make use of volunteers to achieve this ratio.

Exercise 3.2.1 Duration 45 minutes

1. Consider your own experiences of learning in groups of different sizes.
2. Suggest four effects that being in a large group might have on the behaviour of the group.
3. Suggest four effects that being in a small group of five might have on the behaviour of the group.
4. Record your conclusions in your learning diary.

Delivery strategies – how to work with small groups

Small group learning is a move from a tutor-centred strategy which is used with larger groups to a strategy where learning is

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directed more towards the individuals. This means that the individuals can participate more actively in the learning process. Some commonly found group activities are:

Notes

- discussion
- brainstorming
- buzz groups
- group tutorials/seminars.

Exercise 3.2.2 Duration 30 minutes

1. Reflect on your own experience of these methods and any others you have encountered.
2. What were their strengths and weaknesses?
3. Record your conclusions in your learning diary.

Discussions

Discussions are an important part of any learning session, as they can benefit the students by providing an opportunity to share experiences and views. One way you can run a group discussion is to follow a step-by-step approach such as:

1. Introduce the theme and ask questions (useful way of getting a discussion started).
2. Encourage involvement and sharing (encouraging active involvement of all members, watching out for any signs of anxiety or disinterest).
3. Focus on main points (recapping on the main points, which by now will have a greater meaning to the members of the group).

Group discussions can also be informal, and unplanned. Tea breaks between sessions can be as useful an exchange of ideas as those which take place within the class itself!

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Brainstorming

Notes

Brainstorming provides a quick way to generate lots of ideas together in a group. As a tutor you should not dominate the group by sharing your thoughts at an early stage. This method is widely used in training and is very effective for examining different aspects of problems and helping to draw out peoples ideas in a creative and enjoyable way.

There are three main stages of brainstorming:

1. Pose the problem in the form of a question, ensuring that everyone understands the question and guidelines.

2. Generate as many ideas as possible, go for quantity of ideas not quality. Encourage ideas and write them all down, one idea often triggers a series of others, don't judge usefulness until the review session as negative feelings may reduce the flow.

3. As a group evaluate and review each idea, then prioritise the ones that you are most likely to be able to use.

Buzz groups

Buzz groups are small groups of learners who get together during a class to discuss issues and problems, for a short period, (e.g. a few minutes, probably no more than 10) and then report the findings to the whole class. The suggested group size for this sort of exercise is 2 to 4 students. The groups can discuss the same or a different topic. Buzz groups are a leaderless activity, so the groups would work on their own without the tutor contributing. This is an effective way of generating participation. It can work well in either large conferences or individual courses.

Group tutorials / seminars

Seminars are in effect an extension of formal lecturing. At these sessions a small number of students get together with their tutor or facilitator to exchange ideas and discuss problems. At these meetings you can increase students' understanding through careful listening, and perceptive questioning. Try to encourage the students to suggest topics for discussion and to contribute.

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Notes

Exercise 3.2.3 Duration 3 hours

1. Select one of the small group of activities (eg brainstorming).

2. Prepare to use your chosen approach with a small group of learners.

3. Undertake the activity with the learners.

4. Reflect on your experience of using the method. What worked well? What went wrong? How would you improve your approach?

5. Record your conclusions in your learning diary and file any notes or materials you prepared or were created during the activity in your portfolio.

The formation of learning in groups

Tuckman (1965) after comparing many studies on group development found a remarkable consistency in the stages through which the groups went. These include:

- *Forming* – when the group first joins together. Students feel anxious as they don't know what is expected of them.
- *Storming* – when group members are becoming familiar with each other. The students begin to test the boundaries and seek to clarify issues of power and control.
- *Norming* – students establish individual and group trust and safety. The group begins to settle down. Ground rules have been established.
- *Performing* – at this stage the students work hardest at a particular task. The group looks after the needs of its members while at the same time developing the team as a whole.
- *Adjourning* – this is the ending of the course, which is often called mourning. You, as a tutor, should ensure that the sessions come to a formal ending to make certain that participants do not end up dissatisfied.

In reality, you will not find that the dividing lines between the stages are clear cut. However, it should be possible for you to establish which stage applies to the group at any one time. Not

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all groups progress smoothly through the stages: sometimes they get 'stuck' at one particular stage. By understanding what stage the group is at you can seek means to develop the group to its full potential.

Notes

Exercise 3.2.4 Duration 45 minutes

1. Reflect on your own experience of belonging to different groups.

2. Can you recall groups going through the different stages (ie forming, norming, etc)? What happens to the group at each stage and how did it feel to you as an individual group member?

3. Record your conclusions in your learning diary.

Dealing with the unexpected

You may have to change the running of a planned session, for example if fewer people attend than is expected. This can result in the rest of the group feeling disappointed or resentful that the others have not turned up, which for you as the tutor means you have to work hard to maintain interest.

The size of the group places constraints on what you can do. It becomes more difficult to divide people into small groups when there are fewer people. You may find yourself with an odd number, or too few people to participate in the planned activities. However, be flexible in both your preparation and actions during the session. Plan for change.

The difficult group

Some groups fail to gel or get along. There are a number of ways which you can use to deal with this situation. You could ignore the difficulty if there is a temporary reason for it occurring, for example if people are tired at the end of a session. Methods of coping with long-term problems include changing something in the session, discussing the difficulty with the group, or changing the membership of the group.

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Notes

Exercise 3.2.5 Duration 45 minutes

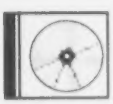
1. Consider how you would use small group working to facilitate an IT session.

2. Write a report on how you would use groups and what you would aiming to achieve. Justify your decisions.

3. File your report in your portfolio.

Tips on working with small groups

- Decide on the intended learning outcomes of the groupwork.
- Groupwork should allow the students to learn at their own pace.
- Brief groups carefully to ensure everyone understands what is supposed to happen.
- Have a 'help' mechanism for group members who feel confused or alienated.
- Do not be afraid to change the groups to vary the learning climate.
- Be flexible and plan for change.
- Use small groups alongside other approaches such as the whole class and individual learning to provide a balanced approach.



Further reading

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Cotton, J (1995) *The Theory of Learners: An Introduction*, London, Kogan Page

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Tuckman, B (1965) Developmental sequence in small groups, *Psychological Bulletin* (63), pp. 384–99.

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Section 3. Whole-Class Teaching

Duration: 6 hours

By the end of this section, you should be able to:

Notes

- understand the structure of an effective short presentation or talk
- grade the content of a presentation in order of importance
- understand the importance of your notes
- prepare your notes
- check the location for your talk
- understand how to deliver a talk.

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Assessment approach

You will be expected to collect evidence of your skill and understanding of this module to form part of your portfolio and learning diary.

The whole-class presentation

Presenting information to a whole class is a very efficient method of giving the same message to everyone in a group. However, it does have a number of limitations, not least the length of time that an individual can concentrate on your presentation. This gives a practical limitation of about 15 to 20 minutes. In a typical two- or three-hour session it is perfectly possible to provide more than one short talk. However, good practice is

Notes

normally to use a mixture of methods, so do not over use the whole-class presentation or any other approach.

Few people are natural public speakers. However, most people can become good satisfactory presenters if they prepare well, follow a sensible approach, undertake some training and practise their skills. The first step is preparation. Most talks have a structure such as:

- introduction
- main theme
- summary and conclusions.

Exercise 3.3.1 Duration 45 minutes

1. Reflect on all the presentations or talks you have heard either in person or on television.

2. What do you feel the most successful presentations and talks were and why? Try to analyse what made them successful.

3. Record your conclusions in your learning diary.

In a twenty-minute presentation the introduction should last about 3 to 4 minutes, main theme about 12 to 13 minutes and summary and conclusions again about 3 to 4 minutes. Each section has a clear objective:

- introduction – to create interest/motivate your group to listen
- main theme – to present systematically and logically your topic, giving examples and using visual aids (if appropriate)
- summary and conclusion – to emphasise the key points of the presentation

During the introduction you should try to motivate your group to listen. You can do this in a variety of ways by explaining why the topic is important to the group, by demonstrating your own enthusiasm for the subject or by engaging their curiosity. A useful thing is to relate your presentation with work they have already undertaken or know they shortly need to tackle.

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The main theme needs to provide a clear structure so that your students find it easy to understand the subject. You can do this by analysing your material so that you order it into a logical series of meaningful chunks which relate to each other. It is useful to identify how important each chunk of information is to the overall topic.

One way of grading importance is:

- Must know – chunks which are essential to understanding the topic
- Should know – chunks which are useful to help meaning but not essential at the moment
- Could know – chunks which are nice to know, but could be left out if you are short of time.

In any short talk the balance of it should consist of 'must' and 'should know' items.

The summary and conclusion sections are to ensure that the group clearly knows what are the key points of the topic. Explain why each one is important and relevant to the group.

During your preparation think about using visual aids and handouts if they will help your group to understand. Visual aids are very powerful way of communicating. However, remember that your group may want to take notes of their contents which may slow down your presentation. You can solve this by providing copies of the slides. If you intend to use handouts of any sort then tell your audience before you start that they do not need to take notes, or give them out at the start. People get annoyed if they have been taking careful notes before being told they do not need to do so. Both issuing the handouts at the beginning or end is effective and is very much about your personal choice. Experiment with the two approaches and with variations such as leaving space on the handouts for students to add their own notes.

Your own notes are critical for the success of the talk. Certainly they provide you with a powerful reassurance that you are not going to dry up and not know what to say. There are some useful pieces of good practice about speaking notes that you should follow:

- visibility – remember that you need to be able to be ready with your notes at a distance perhaps in a darkened room if you are using an overhead projector.
- detail – on most occasions you do not need to have detailed notes. It is very difficult to read out loud, make it sound natural and convey your own enthusiasm. Also

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it is easy to get lost in detailed notes when you are not reading directly from them. The best approach is to use a series of key points which provides you with a structure and a reminder of the main issues you want to explain.

- posture – whether you stand up or sit down during the talk depends on personal preference. Do what is natural to you. There is nothing wrong with either approach but remember that the objective of the presentation is that the group understands, so do not let your behaviour distract them.

Example

Notes for a talk: Introduction to the Internet

Introduction

Brief history of the Internet:

- Military research project linking institutions undertaking research
- Expanded into other areas of academic life
- Telnet
- Development of a standard language for ease of access: HTML
- Development of browser which works with HTML

Main body

World Wide Web:

- very rapid growth of sites although mainly English language
- individual access
- individual sites
- simple way of publishing
- HTML a straightforward language
- many Internet Service Providers offer Web space

Internet is essentially the structure of lines, computers and services, while the World Wide Web is mainly the content – although the Web is developing services similar to other Internet services such as chat. Internet Relay Chat versus Web-based chat.

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Communication is a very important part of the Internet:

- e-mail, mailgroups, newsgroups and chat open up low cost, reliable fast, worldwide communication between individuals, organisations and groups. For example, Citizenship on-line USA with a large proportion of some areas having access to the Internet has seen the growth of political discussion/newsgroups which have allowed people to have a new way of influencing politicians and each other.
- Speed of communication is changing working practices. For example, it is now possible to put together a European partnership in a few weeks/days without the partners ever meeting.

Medium is developing rapidly with the Internet rapidly becoming multimedia. The key issue is bandwidth.

Explain what bandwidth is.

How wide is the path? A modem will transmit a maximum of:

28,800 bits per second

33,600 bits per second

56,000 bits per second

These speeds are rarely reached in practice. Telephone line limit of about 33,600 bps but new technology allows downloading at 56,000 bps.

Cable is about 25 times faster but requires a cable modem.

ISDN is approximately 8 times faster (128,000 bps) due mainly to difference between digital and analogue.

A single picture 800x400 in full colour requires approximately 1,000,000 bits to send send – it will take about 20 seconds to download.

Video requires 25 or 30 frames per second, ie 25,000,000 bits per second or 1 minute of video will take 1000 minutes to download.

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Solution: *Notes*

1. Compression
2. Reduce size and frame rate
3. Streaming technology

Sound requires less capacity than video.

Summary

- Internet versus World Wide Web
- Communication
- Media

During your preparations it is important to consider:

- the objective of the talk
- the students' existing knowledge
- what you want the students to be able to do after the talk
- when you are going to present the talk. There are considerable differences between an enthusiastic group at 10am just starting a new session who are bright, alert and full of energy and the same group at 4pm at the end of a long day who are tired and already full of new knowledge. The best time for a short talk is likely to be at the beginning of a session.
- the nature of the location. In a computer room you have the problem of many computer displays to distract the audience from listening to you. You need to decide how to gain the attention of the group. You can:
  - ask them to switch off the monitors
  - ask them to turn away from the computers and face you
  - ask them to move their chairs to form a circle around you
  - set up a special area for talks away from the computers
- the use of visual aids. You need to check the room to make sure that the group can see them. It is important to remember that if you stand near the projector then you will often get in the way of the display.
- you may want to consider using applications such as Powerpoint to develop your slides, handouts and presentation. If you are helping people to learn about Infor-

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mation Technology a useful example is to show your own confidence by using the technology as an aid to your talk.

Some basic good practice when you are giving a talk is:

- If you are going to a new location then get there early and check the venue:
  - layout
  - visual aids
  - safety
  - lighting – can you darken the room?
  - make sure everyone can hear and see.
- Remember that people often are influenced by first impressions so decide how you want to present yourself.
- Direct your talk to the whole group. Look around the room at all the group members. New speakers will often focus on a friendly face so much that they are unaware of how the rest of the audience is reacting to the presentation.
- Talk naturally so that everyone can hear you. Feel free to wave your arms about if this is natural to you. It is important to show your own interest in the subject.
- Speak with confidence. You will not encourage a group to listen if you start with your own doubts (eg I am sorry that you have to learn about ...). If you have doubts about the topic do not give the talk.
- Try not to wander around the room without a purpose. It is perfectly sound to move to point out a key issue on the overhead projector display but avoid pacing up and down without a reason.
- Pause at appropriate points and ask if the group has any questions.
- Think about what questions you may be asked and prepare your answers. It is not easy to guess all the questions you will be asked and if you do not know the answer just say so and try to find out the answer later.
- Few people can judge time accurately so put your watch where you can see it without being too obvious that you are checking the time.
- When you are finished clearly tell the group what happens next.

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Exercise 3.3.2 Duration 3 hours

1. Choose a subject and prepare a twenty-minute talk.

2. Consider a group you are working with and a topic they will need to understand. For example
   a) Internet Service Providers
   b) What is a computer?
   c) Multimedia

3. Write your notes, prepare your visual aids and handouts if appropriate.

4. You may want to consider using applications such as Powerpoint which will help you design overhead projector slides, video projector presentations and handouts.

5. Ask your tutor or a colleague to check your preparations

6. Carry out the talk

7. Reflect on how the talk was received and what you would do differently next time you present a talk. Record your finding in your learning diary and keep your talk notes and visual aids in your portfolio.

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Section 4. Demonstrations

Duration: 6 hours

By the end of this section, you should be able to:

Notes

- understand the purpose of demonstrations
- carry out a demonstration
- use learner demonstrations to assess their understanding.

Assessment approach

You will be expected to collect evidence of your skill and understanding of this module to form part of your portfolio and learning diary.

Introduction

Information Technology involves learners in developing a range of practical skills (eg searching for a particular website, loading an application and using a mouse). A demonstration is a powerful method of showing an individual or group of learners how to carry out a task. However, there is a major limitation in that only a small number of people can gather around a single monitor with a clear view of the screen. Demonstrations which take place around a single monitor are effectively limited to two or three learners. You must always ensure that each student can see and hear everything during a demonstration. Do not be attempted to crowd as many people as you can around the monitor to get the job done quickly. It is much better to repeat the demonstration. New learners can be alienated by poor teaching and few things are worse than being at the back of a group unable to see or hear what is going on.

There are alternative approaches which can contribute to the effectiveness of the demonstration providing you have access to the right technology. They are:

- using a video projector – this allows you to project a large image of your screen display so that the whole class

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can see what is happening. However, you will need to make sure that they can hear. When you are demonstrating it is natural to focus on the screen so that you tend to talk to the monitor. The class may find it difficult to hear and not everyone will tell you that you need to speak louder. You need to make an effort to project your voice.

- networking the computers – it is possible to network a classroom of computers so that the tutor can transmit a demonstration to each individual computer. However, hearing may be difficult with many people having their backs turned to the tutor. In some cases you may need to use a microphone to ensure everyone can hear.
- producing electronic handouts – Lotus ScreenCam is an application which allows you to capture a sequence of displays and actions to produce a short movie of your demonstration. This should not be used to replace your demonstration but to supplement it. Learners can revise the task after the demonstration. An electronic handout is especially useful if learners have access to computers between sessions. An additional benefit is that in preparing electronic handouts you must practise the demonstration at least once.

Exercise 3.4.1 Duration 45 minutes

1. Reflect on your own experience of demonstrations, both those which you have done yourself and those which other people have carried out.

2. Consider their strengths and weaknesses. What made them successful? What made them fail?

3. Record your conclusions in your learning diary.

Purpose of a demonstration

A demonstration can serve a number of purposes. These include:

- showing the visual relationship between different items (eg changing shape of the mouse pointer and position on the screen)

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- explaining what appears to be a complex series of actions by breaking them down into individual steps
- reducing learner anxiety about using a new application
- showing alternative ways of carrying out a task (Windows 95 provides many different ways of undertaking the same task)
- persuading learners to try something new
- showing the features of an application
- showing the computer hardware
- diagnosing problems and needs of an individual or group of learners.

How to demonstrate

There is a straightforward approach to demonstrating which if you follow it should ensure a high degree of success. The procedure is:

- Preparation – work through the task you are going to demonstrate and take notes of the key points (see one-to-one module). This will refresh your memory and ensure that you do not encounter any surprises when you have an audience watching you.
- Introduction – explain what you are going to do and why it is important.
- Scope – keep the demonstration small. It is better to do less, better. Learners have to concentrate on the demonstration to gain the benefit so do not overwhelm them with too much.
- Relationships – explain how the demonstration relates to the other things they have been studying
- Demonstration – carry out the demonstration, explaining each step and action. Go slowly and systematically through the task. It is useful to recap at regular intervals. Explain any technical terms in plain English.
- Summarise – give a summary at the end.
- Questioning – encourage the learners to ask questions.
- Repetition – repeat the demonstration if you are requested to do so, or feel that the group do not understand, or you judge the task you have been demonstrating to be difficult to master.
- Practise – ask the learners to practise.
- Assess – observe the learners practise and offer help if needed.

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Exercise 3.4.2 Duration 2 hours

1. Choose a task which your learners will normally need to master.

2. Prepare a demonstration of your chosen task following the approach described in the tutorial

3. Carry out the demonstration

4. Reflect on how the demonstration went and record your feelings with any changes you would like to make in your learning diary and file your preparation notes in your portfolio.

5. If you are able, ask a colleague or your tutor to observe your demonstration and later review your performance. Record the review in your diary and portfolio.

Learner demonstration

A variation on the small group demonstration is the individual learner demonstration. This serves the same purposes as a group demonstration with the additional benefit of helping an individual who has encountered a problem. Frequently, individuals find a particular task or approach more difficult than the rest of the group and need your help to overcome the barrier. The approach you need to follow is to:

- discover what the problem is. Ask the learner to tell and show you what goes wrong. It is important to avoid telling them what they already know so try to focus on the precise need. It is useful to ask them to explain what they are doing as they show you. This will help you to identify their level of understanding as well as testing their practical skill. Learners will often memorise a series of steps while not necessarily understanding why they are doing them.
- demonstrate the task slowly to them, explaining what you are doing and any technical terms in plain English
- ask them to explain what they have seen

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- ask them to try to reproduce the demonstration for you including explaining to you what they are doing
- correct any mistakes as they occur, remembering to praise the things they got right.
- ask the learners to practise.

The important points are not to spend too long concentrating on an individual demonstration. If things are still going wrong after about 30 minutes take a break and return to the problem later. Do not let the learner get frustrated or beginning to doubt that they will ever succeed.

Exercise 3.4.3 Duration 2 hours

1. Identify a problem which one of your learners is finding difficult.

2. Carry out the individual demonstration approach

3. Reflect on how the demonstration went and record your feelings with any changes you would like to make in your learning diary and file your preparation notes in your portfolio.

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Module 4

Designing and delivering an IT Course

Duration: 30 hours

Notes

This module consists of five sections and covers a range of topics including both general issues relating to most courses and specific IT details. The five sections are:

- Introduction to Session Planning – 3 hours
- Learning Aids – 10 hours
- Hints and Tips – 5 hours
- IT Content 1 – 8 hours
- IT Content 2 – 4 hours

By the end of this module, you should be able to:

- set aims and objectives
- plan a session
- prepare a written plan
- support your learners using a variety of materials, namely visual and written aids
- assess the suitability of the available aids
- adapt these aids to fit in with your groups
- understand the importance of recording problems learners encounter so that they can be overcome, avoided or turn them into positive experiences
- understand some ways of exploiting standard Windows features to aid learning
- understand the meaning of error messages
- use some hints and tips to aid learning
- understand the choices available to you when deciding on the content of a course
- understand the needs of learners
- understand what aspects of computer hardware to include

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- understand what aspects of the operating system to include
- understand what aspects of applications to include
- be aware of the possible content of a session concentrating on all the main computer applications
- be able to select appropriate content.

Assessment approach

You will be expected to collect evidence of your skill and understanding of this module to form part of your portfolio and learning diary. Each exercise contains instructions about where to record evidence that you have completed the task. However, you should also add any other information which will demonstrate your understanding and skill.

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Section 1. Introduction to Session Planning

Duration: 3 hours

By the end of this section, you should be able to: *Notes*

- set aims and objectives
- plan a session
- prepare a written plan.

Assessment approach

You will be expected to collect evidence of your skill and understanding of this module to form part of your portfolio and learning diary.

Preparing a session plan

Aims and objectives:

The first things you will need to think about and be clear of in your own mind before you actually write your session plan are the overall objectives for the course and the aims and objectives for each session. Perhaps it would be helpful if we give you a definition of these terms:

- Aims: what you as a tutor intend to do in the session.
- Objectives: what your learners should be able to do by the end of the session

You should be aware that sometimes you may find the term *goals* used instead of the terms *aims and objectives*. Make sure that you begin by writing down your aims and objectives and be sure to let your learners know what these are at the very beginning of each session. Adult learners are always interested to know what they are going to be doing in a session and what is expected of them.

Session structure and sequence

Notes

Once you have written your aims and objectives for the session, you then need to decide on the structure and sequence of the session. Your session plan will need to follow a logical sequence and make the most effective use of available time.

Think about the following:

- What is the aim/goal of the session?
- How can you make the session interesting?
- What teaching methods will you use?
- How can you encourage participation and have maximum student activity?
- How will you relate new learning to real-life situations?
- How can you ensure 'continuity' and avoid huge 'leaps'?
- What learning aids will you need for the session eg handouts, whiteboard, flipchart, pens, etc?
- How much time will you set aside for each activity?
- At what stages in the session will you re-cap, allow time for questions and answers, assess student progress, give feedback, and summarise?

Session plans can be as individual as you want to make them – you can hand-write your plans, type them or even produce a sesion plan template on your computer; they could be A4 portrait or A4 landscape, but however you design them, session plans should always contain certain common elements such as aims and objectives, length of session, resources, activities, teaching methods, and timings.

An example of a session plan format:

Date: 13 February 1998 **Time:** 6.00 pm
Session: 4 of 12
Group: Volunteers **Location:** Village Hall
Duration: 3 hours
Subject: Introduction to IT Skills
Students: 12 adult learners
Aims: To introduce students to spreadsheets through Microsoft Excel 97
Objectives: 1. To enter data into an existing spreadsheet
2. To amend the structure of a spreadsheet
3. etc

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Equipment/Resources: 12 personal computers and two printers; and Microsoft Office 97 x 12 copies

Activity	Method	Time
1. Review of the last session		15 mins
2. Main Activity – Theory		30 mins
3. Main Activity – Demonstration		15 mins
4. Main Activity – Practical	Individuals	75 mins
5. Feedback	Question and Answer	15 mins
6. Review		15 mins
7. Homework		15 mins

The session plan example can be tailored to suit the requirements of the various classes which you may support. It is useful to include a section in your session plan where you can keep a note of any comments made or queries raised during the session that need to be answered at the next session, otherwise it is all too easy to forget, especially when you are dealing with more than one group.

Try to be flexible and adaptable in your session planning as the unexpected can always happen, eg there might be a power failure half way through your session. Don't worry, you can carry material over to the following week. You may also have to adapt and change your plans to meet the needs of the learners. Remember session plans are not written in tablets of stone – they can be changed!

Session plan checklist

You may find it a good reminder to refer to the following checklist when you write your session plans:

1. *What am I going to cover in this session?* What new material are you going to introduce your students to?
2. *Why do they need to learn this?* How does it fit in with the learners' long-term goals? How can you make sure that the learners understand why they are learning this?
3. *How can I introduce this new material?* What methods will you use? Try to use a variety of methods and activities in order to maintain interest. Be flexible and be ready to adapt to your learners' pace and needs
4. *What materials/aids will I need in the session?* Are any handouts you use relevant and interesting? Are they adult-oriented and appropriate in terms of gender and culture?

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5. *Tutorial: How and when will I evaluate the session and give feedback?* What do your learners feel they have learned? What do you feel they have learned? If the objectives were not met – why do you think this was?
6. *What comments or observations do I have on the session?* How do you feel the session went? Have you made a note of any queries that need answering at the next session?

Exercise 4.1.1 Duration 2 hours

1. Adapt the example session plan to meet your needs.
2. Prepare a session plan for a session which you are running.
3. Carry out the session using the session plan and reflect how it helped or hindered your work.
4. Record your conclusions in your learning diary and file your session plan in your portfolio.

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Section 2. Learning Aids

Duration: 10 hours

By the end of this section, you should be able to:

Notes

- support your learners using a variety of materials, namely visual and written aids
- assess the suitability of the available aids
- adapt these aids to fit in with your groups.

Exercise

Assessment approach

You will be expected to collect evidence of your skill and understanding of this module to form part of your portfolio and learning diary.

Visual aids

Visual aids can greatly assist in the learning process by attracting and holding attention, explaining difficult concepts and stimulating interaction. We have all heard the old saying that a picture is worth a thousand words: in many ways this is especially true of learning.

What are visual aids?

There are a number of ways of presenting learning materials

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including video, overhead projectors, white-boards, flipcharts, lotus screencam presentations, powerpoint slides and tape recorders. Some readily available aids include:

Flip charts

The aim of a flip chart is to present or record a few key ideas which can be expanded on further with your own verbal explanation. The advantages of using flipcharts include:

- inexpensive and easy to use
- can be prepared in advance or during the session
- can be created by you or the student
- useful for stimulating interaction
- useful for brainstorming ideas
- sheets can also be displayed like posters following discussion (use adhesive pads to fix temporarily to walls)

Tips on using flipcharts:

- lettering should be big, and bold (can you read it from the back of the room?)
- don't put too much on them, keep the content well spaced out and interesting to look at
- use bullet points to illustrate key items and linked points
- record student contributions on them.

Chalk and white boards

Whiteboards have a glossy finish that is easy to clean, and are normally wall-mounted or else come with a stand. They need to be used with special pens or you risk damaging their suface. There are electronic whiteboards which are able to copy the surface of the board onto paper to provide handouts. Chalk boards are very useful for writing down key points of information. The same tips apply as for flipcharts.

Overhead Projectors (OHP) and Transparencies (OHT)

OHPs project dense light through a slide transparency (OHT) which is then focused on a screen. OHTs are a popular visual aid for many teachers, especially for larger, more structured group sessions. The advantages of using an OHP include:

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- enables you to face the class with the screen behind you
- you can write directly on to transparencies
- a list of points can be revealed in turn as you deal with them.

Tips on using OHPs

- Make sure that each OHT expresses one idea
- Check that people can see the OHT clearly. Use large lettering and check legibility from a distance. It is always useful to view your slide from the rear of the room to check their legibility.
- Restrict bullet lists to no more than 4 or 5 points.
- Try to vary what is being shown – don't get stuck on a particular style but be careful not to distract.
- Keep the information clear, simple, and readable. Use colour to add interest and to highlight key points.

Video

The main advantage of using videos is that they can show what you cannot easily describe or demonstrate in the training room.

Tips on using videos

- The video should be aimed at one or more clear training objectives and be well structured.
- You should look critically at the videos you intend to use and if you are not impressed with them, look for other videos.
- Become familiar with the content and prepare the students so they know what to look out for.

Exercise 4.2.1 Duration 2 hours

1. Prepare a short session on a computer topic such as uses of databases, multimedia or world wide web.

2. Prepare visual aids using at least two different types of aid (eg flipcharts and OHPs).

3. File copies of the visual aids and your notes in your portfolio.

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Finally, a few general hints and tips on using visual aids: *Notes*

- Make sure that the aid is visible to all the students.
- Set up before the students arrive. It is harder to set up equipment when people are watching you.
- Check that the visual aid will meet your requirements, that it contains all the information that you want it to.
- When selecting the type of equipment that you want for your chosen visual aid, consider if it is going to be available, and suitable, for your course.
- Visual aids are very effective in reinforcing learning but they do not take the place of a well planned session.

Exercise 4.2.2 Duration 3 hours

1. Check the classroom you normally use for its suitability for different types of visual aids.

2. View your aids from different parts of the room (ie front row, back row and sides).

3. Are your aids legible? How could you improve them?

4. Decide where you could stand or sit to avoid blocking the view of any of the learners.

5. Reflect on your experience and record your conclusions in your learning diary.

What are written materials?

Written teaching material can take on many forms. You will find that handouts and course booklets are very widely used.

Handouts

Printed handouts can be a useful supplement to points presented verbally or during a demonstration. The information

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can be presented in a variety of ways and given out at different times during the session. There are two main types of handout, these are known as conventional (full set) and Interactive. Handouts are popular with students.

Conventional handout

A handout provides a complete set of notes on specific areas or topics. They eliminate the need for learners to take notes.

Interactive handout

An interactive handout involves the student being active, perhaps by annotating a basic, outline set of notes. The handouts could:

- get participants thinking about their own experiences
- develop/extend basic ideas
- ask how they could apply new information
- identify problems that could arise.
- ask questions for students to answer to provide them with a self-assessment

Interactive handouts stimulate active involvement during the course. This means that students have to think harder and contribute more. You will find out more about the students and whether they are understanding what you are teaching.

Hints on preparing handouts:

- use plain English
- use short words and short sentences
- address the reader directly
- give examples the reader can relate to
- try to make them interactive.

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Exercise 4.2.3 Duration 3 hours

1. Prepare a traditional handout on a computer topic such as operating systems, graphics or word-processing.
2. Use the handout in a session.
3. Prepare an interactive handout on a computer topic.
4. Use the interactive handout in a session.
5. Ask the learners for feedback on both handouts. Record their comments and keep the two handouts in your portfolio.
6. Reflect on your experience and record your views on the design of the handouts and their strength and weaknesses.

Distributing the handout

There are advantages and disadvantages to distributing handouts before, during or at the end of a training session.

Before the session

One of the main advantages of distributing the handouts before a session is that they can be used as a taster for what is to come in the session itself. It also gets the student thinking about what will be included. The main disadvantage of this is that it may give your student the wrong impression about what will be covered.

During the session

This can reassure the student as they have something tangible to refer to. It also provides you and the students with a break from the training session. However, a major drawback is that you might lose the group's attention as the individual students become more interested in what is on the sheet.

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At the end of the session

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By handing out the material at the end of the lesson you provide a useful back-up to what has been covered in the session. But students might file away the handout and not bother to read it at all. It is useful to include handouts as part of the session review.

Workbooks

Workbooks serve much the same function as handouts. They could be in a loose-leaf format, and generally aim to provide a well ordered, comprehensive record of the contents of the course. They have the advantage that all papers are kept in one place. Workbooks could include:

- copies of every OHT or flipchart
- floppy disk of work undertaken
- handouts that are a summary of your input
- interactive handouts to encourage active involvement in your input sessions
- printouts of exercises
- background information
- details of the instructions for any activity
- feedback sheets for particular activities
- blank sheets of paper for notes.

The advantage of keeping to a loose leaf format for participants' workbooks is that you can control when you distribute the contents. You give out the documents in relation to what you have covered.

It is worth spending time on the design and lay-out of your material. Dense blocks of text are uninviting and difficult to read so you should split them up into short paragraphs and sections with headings and bullet points. You may wish to consider providing the students with an electronic version. This will allow them to customise it.

Criteria for selecting learning materials

The crucial question to ask when selecting material is 'will it help learners to achieve their learning objectives?' This means that you have to modify material to make it more relevant to the learners' needs and easier for them to use.

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Section 3. Hints and Tips

Duration: 5 hours

By the end of this section, you should be able to:

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- understand the importance of recording problems learners encounter so that they can be overcome, avoided or turned into positive experiences
- understand some ways of exploiting standard Windows features to aid learning
- understand the meaning of error messages
- use some hints and tips to aid learning

Assessment approach

You will be expected to collect evidence of your skill and understanding of this module to form part of your portfolio and learning diary.

Information Technology learning – hints and tips

You should try to put yourself in the place of the learner and try to think through what they will find difficult and how you could overcome these difficulties. The list below is essentially based on the experience of a wide range of IT tutors. All the hints and tips are not intended to be used on every occasion but where they could be helpful.

Notes

Exercise 4.3.1 Duration 30 minutes

1. Reflect on your own experience of learning to use IT and your observations of others.

2. What were the main difficulties you and others faced?

3. Record your conclusions in your learning diary.

4. From now on record each difficulty, no matter how small, you observe learners having and file them in your portfolio.

Communication

A simple tip is to discuss problems with the learner concerned to see if they have any ideas to solve the problem. Adult learners have a lot to contribute to the success of their own learning. They know themselves well and have an understanding of how they prefer to learn.

Encourage the individual learners to discuss the issues and to help each other. Most people will do this automatically if you do not discourage it.

Learning approach

Many adults prefer to learn through practical activities so make your approach active. However, do not leave out the theory, integrate it into the practical work by including it in your hand-outs and exercises.

Mouse

Early in the first session of the course identify any left-handed users and ask them if they would prefer to use the mouse left-handed. Change the system to left-handed use by:

Click Start
Select Settings
Click on Control Panel
Double click on mouse icon and make changes

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Notes

This also provides access to other facilities which you should consider:

- double clicking speed (it may be useful for beginners to slow down the rate)
- mouse trails (sometimes useful with new learners to provide the mouse with a trail so that they have an easier way of seeing where the mouse has gone. New learners frequently lose sight of the mouse pointer)
- pointer speed

Windows 95 provides an effective alternative to the mouse by allowing part of the keyboard to control a screen pointer. These are available through the Accessibility Options on the Control Panel which also provides a range of other features such as sound effects when you press keys such as the number lock. You should explore these options.

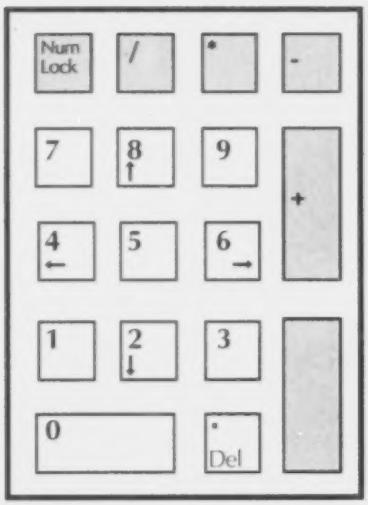

Figure 4.1 *Alternative to a Mouse*

Mouse pointers

The mouse pointer frequently changes shape within Windows 95. Each shape change indicates some useful information. For example, when the pointer changes into an hourglass, it indicates that the system is busy and you cannot do anything until it is finished. It is useful to explain each change of shape as the

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learner encounters it (Figure 4.2). A handout of all the changes is useful. Explaining the changes in context will aid learning.

Notes

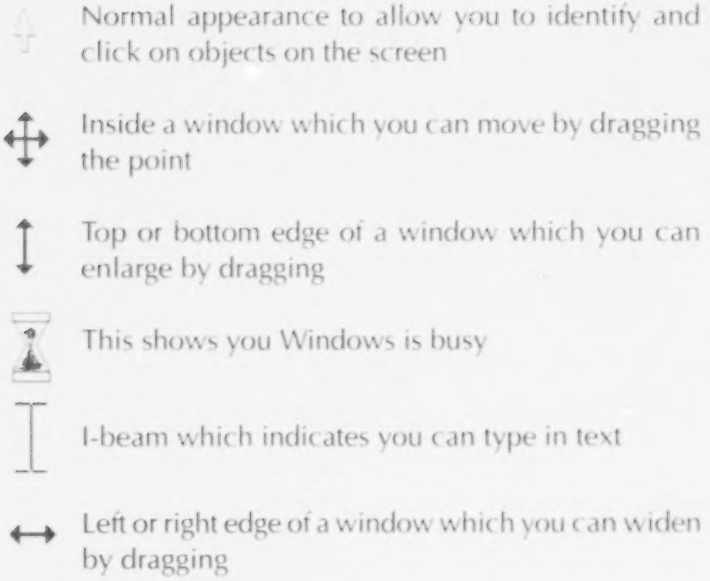
Normal appearance to allow you to identify and click on objects on the screen
Inside a window which you can move by dragging the point
Top or bottom edge of a window which you can enlarge by dragging
This shows you Windows is busy
I-beam which indicates you can type in text
Left or right edge of a window which you can widen by dragging

Figure 4.2 *Mouse pointer shapes*

Keyboard

You should consider the basic keyboard settings which you access through the Control Panel. This offers you control over:

- Character repeat (i.e. repeat delay and repeat rate)
- Cursor blink rate (if you set it too slow your learners may find it difficult to locate).

You need to explore these options to identify what are the optimum settings.

Operating system

It is difficult to show a new user the difference between an operating system and an application. One simple tip is to ask the student to observe what appears on the screen when the computer boots up. They will see a number of statements showing the operating system checking the hardware and establishing the environment:

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Example

Notes

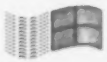
Memory test
Detecting
Starting Windows 95

You can use these messages to illustrate and explain the nature of operating systems.

Many ways

There are many alternative ways to carry out tasks within Windows 95. This is often a source of confusion to new learners. However, it can be turned into a strength by emphasising that they do not have to remember everything. It is perfectly possible simply to try different ways in Windows 95. For example:

Windows Key performs the same function as clicking on the Start button



Print screen key

The print screen key provides a useful way of demonstrating several useful features of computing and Windows 95. These are:

- capturing a picture of the screen perhaps to be used as a self made handout
- using Windows 95 clipboard to save an image
- pasting an image into a document
- printing an image

With new learners it provides a straightforward way of showing some of the power of a computer.

The screen is captured by pressing the print screen key. The resulting image can be seen using the Clipboard Viewer. This is located in the Start Program list as one of the Accessories.

Error messages

Most people find error messages difficult to understand. New

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Notes

users of computers will often become concerned and assume that they have broken the machine. You need to explain how Windows 95 provides messages. That is:

- they are usually short – a single sentence is the norm
- they do not tell you what caused the error and it is often not connected with the learner making a mistake. It is often related to the way the computer has been configured
- they normally do not tell you how to remove the error.

You will find a list of Windows 95 errors below. Each error is explained and a possible solution suggested. Unfortunately it is not possible to provide solutions for every possible cause of every error.

1. *A:\ is not accessible. The device is not ready.* This probably means that you have not put a floppy disk into the A: drive. If you insert a floppy disk then you will solve the problem.

2. *Destination disk is full.* This occurs when you try to save a file. The message is telling you that there is no room left on the floppy or hard disk to store the file. Replace the floppy disk you are using with a new one or if it is the hard disk then you will need to delete some files to make space. Modern applications are very large and it is easy to fill even what seems to be an enormous hard disk with a small number of applications. Games often take up a lot of storage.

3. *Filename is not valid.* This is associated with saving a file. The computer is telling you that you have chosen a name for the file which it will not accept. This is usually because you have included in the name some characters Windows 95 will not accept (eg : / *|<>?"). The solution is to rename your file.

4. *Not enough memory.* This means you have run out of working (RAM) memory. This is often due to having too many windows and applications open. You should close the windows you do not immediately need and this should solve the immediate problem. However, this also indicates that your machine needs more memory to operate to its full potential. Windows 95 operates more efficiently the more memory it has available. Consider upgrading your machines (eg 8 Mbytes to 16 Mbytes).

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Notes

5. *Windows 95 was not properly shut down.* This is a very common error message. It tells you that whoever shut down Windows 95 and switched off the computer did not follow the correct procedure. Usually this means that someone simply switched the machine off. The correct procedure is:

   Click Start
   Click Shut down
   Click OK and wait for Windows to tell you it is safe to switch off before doing so.

This probably reveals a learning need.

6. *Open with.* This happens when you double click on a file expecting Windows 95 to recognise which application created it and to open the file within the application (eg click on a Word file and Windows 95 will start the word-processor with the file open). In this case Windows does not recognise the file and asks you to tell it which application created the file. A list of applications which are available will be displayed for you to choose.

   However, this error often happens when you have been given a file by someone who assumes you have the right application to read it and you have not got the program. There is little you can do except to buy a copy of the required application or to decide not to use that file.

7. *Deleting this file will make it impossible to run this program and may make it impossible for you to edit some documents.* You are trying to delete a file containing a program/application. You may be clearing out your hard disk. Just check to make sure you want to delete this particular program (see error 8). If you make a mistake then the program can be found in the recycle bin or you can re-install the program from the master disks or CD-ROM it was supplied on.

8. *File or folder that this shortcut refers to cannot be found.* You have clicked on a shortcut icon on your desktop and Windows 95 cannot find the application to which it should be connected. This may be due to the application having been earlier deleted or moved to a new location. Check if the application is still stored on the disk. You can use the Find option within the Start menu or Windows Explorer option on Start Program list. If you have

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recently deleted it you may locate the application in the recycle bin. *Notes*

9. *This disk is write protected*. This occurs when you are trying to save a file to a floppy disk. The disk has been write protected which means that it has been fixed so that you cannot add new files to it. This is normally done to avoid the error of overwriting an existing file. You can remove write protection in a few seconds. Eject the floppy disk from the drive and on the back right hand corner you will see a small slider. Move the slider down so that a small hole is left in the disk. You can now save your file to the disk.

Exercise 4.3.2 Duration 30 minutes

1. Design a straightforward record on which you can record error messages which you encounter, their meaning and solution.
2. File the record in your portfolio.

Modems

It is useful to install the modem so that the normal sounds it makes are audible. This will help you explain how the modem converts electronic information into sound for transmission over a telephone line. Other points to stress are:

- computers on each end of the telephone line need modems in order to communicate
- Internet Service Providers have many modems connected to their telephone lines
- two types of modem (ie internal and external)
- modems need communication software in order to function
- difference between Internet Services Providers and Online Service Providers

Memory

It helps if you can provide real world examples to show people what different amounts of memory mean. New users cannot

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Notes

visualise a kilobyte without concrete examples. For example, a page of text is approximately 2 kilobytes; a word such as 'double spaced' needs 13 bytes – notice the space needs a byte to store it. A CD-ROM stores 600 megabytes

Windows 95 allows you to check on file sizes by clicking on Properties while the file name is highlighted. It is useful to allow learners to check file sizes for themselves and perhaps compare how many files they could store on a floppy disk.

It is important to distinguish between memory and storage (ie RAM and hard disk). Since both are measured in bytes, learners are frequently confused and find it difficult to separate them. For example, many learners when they receive an error message such as 'Insufficient Memory' believe that they have no hard disk space left. In fact, the message may indicate that you have exceeded the available RAM.

Exercise 4.3.3 Duration 30 minutes

1. Develop three concrete examples which could be used to explain memory.

2. Record your examples in your portfolio. Test their effectiveness with new learners and record their effectiveness.

Undo

There are four ways in Windows 95 of accessing the Undo option:

1. Click on Edit and then on Undo
2. Press and release Alt key and then press E (for Edit) and now press U (for Undo)
3. Hold down Ctrl key and press z. This will undo your last action.
4. Click on Undo icon

Lost files

Learners often misplace files, forget where they have saved files to and generally get confused. It is useful to show them that

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Notes

Windows 95 provides a powerful means of locating files. This is the Find option which is located on the pop up menu activated by clicking on Start.

Find is a useful option in that it will search a drive (eg C:) for a file even if you can remember only part of the file name. The Date Modified option allows you to search for a file by the date you created it even if you do not know its name. The Advanced option allows you to search for files by their type (eg graphic files). These functions are very useful to locate learners' work.

Windows Explorer

Windows Explorer provides you with a way of illustrating the structure of folders. It can be useful to you in showing how folders are stored and the hierarchy of folders (ie tree structure). In addition you can use it to show the meaning of path.

Internet

It is important to stress that the process of accessing the Internet varies considerably depending on your chosen Internet Service Provider, communication software and environment (eg stand alone or networked computer). Learners need to be clear that when they access the Internet from another site, it is going to be a different process. If this is not explained learners are often confused. They have no reason not to expect it to be identical to what they have seen in the classroom.

It is easy to believe that you have exited the Internet, so explain how to check:

- check taskbar for the connection icon. If it is there, you are still connected
- pick up the telephone and if you hear modem sounds you are connected. However, picking up the telephone will normally break the connection.

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Notes

Exercise 4.3.4 Duration 2 hours

1. Use some hints and tips to assist your teaching, eg:
   - adjust mouse for a new left-handed user
   - prepare a handout explaining Windows error messages
   - preparing a handout explaining the significance of changes in mouse pointer shape.

2. Try out approaches and handouts and record how effective they are and your own feelings.

3. Reflect on how useful you found the hints and tips and record your views in your learning diary.

4. Keep copies of your handouts and other materials in your portfolio.

Why not develop your own list of hints and tips?

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Section 4. Information Technology Content – 1

Duration: 8 hours

By the end of this section, you should be able to consider:

Notes

- the choices available to you when deciding on the content of a course
- the needs of learners
- what aspects of computer hardware to include
- what aspects of the operating system to include
- what aspects of applications to include.

Nursery School, Crewe

Assessment approach

You will be expected to collect evidence of your skill and understanding of this module to form part of your portfolio and learning diary.

Content of an Information Technology course

When you are designing any course you are faced with a variety of choices and alternative approaches. Information Technology courses are no different. It is not easy to decide which is the best way of proceeding. However, the key issue is to

take some time to consider your options and the objectives you want to achieve. The key points to consider are: *Notes*

- Who are your learners?
- What experience of IT do they already have?
- What would they like to achieve?
- Would they like to achieve a qualification as part of the course?
- What facilities do you have (ie computers, printers, software, etc)?
- How long will the course last?
- When will you hold sessions?

If you would like to offer a qualification then this will provide a solid platform on which to develop your course. A qualification will provide you with a distinct syllabus on which to base your course. It is impossible to know your precise needs but the ideas illustrated in this module should be suitable for a wide range of circumstances and qualification syllabuses although you will need to modify and adapt the ideas to fit.

Exercise 4.4.1 Duration 45 minutes

1. Consider the learners you have encountered and write a breakdown of their needs and characteristics.

2. Record your conclusions in your learning diary.

First steps

Adults attending their first computer or information technology course are likely to need initially to develop:

- confidence
- competence in using a mouse or similar input device
- keyboard skills
- a framework to make sense of the technology

Some of these needs have been addressed in other parts of the pack. In this section you will be considering the content of the course.

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Computer hardware

Notes

All learners need to develop an understanding of the physical components of a computer. It is perhaps useful in the first session to show and explain to the students the hardware that they will be using. You will need to reinforce this initial explanation in later sessions. For new learners understanding the different parts of a computer system is not easy. They will need to time to absorb, reflect and practise with the equipment before they are competent.

The basic components to show and explain are:

- monitor (alternative names e.g. screen, VDU and CRT)
- Keyboard
- Mouse
- Floppy drive and disks
- Hard disk
- CD-ROM drive and disks
- CPU
- Modem
- Printer
- Cables linking components together.

During the initial session you should focus on an overview of the system perhaps by physically taking a computer apart (if you have an old machine). This is fun to do and helps to break the ice. There are plenty of opportunities to involve the students (eg using the screw drivers to dismantle the computer, touching and holding components etc). Do not allow your students to simply sit and watch. They should be involved as much as possible.

In later sessions you should aim to build on this foundation to:

- explain the difference between RAM (ie memory that is only there while the power is on) and Hard disk storage (ie permanent storage)
- explain difference between floppy disks and CD-ROMs (ie you can read and write information to a floppy while you can only read information from a CD-ROM).
- nature of communication links (ie modem links computer to telephone line and another modem at the other end links to another computer and hence to the Internet)
- printers

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Notes

You should try to integrate this type of knowledge into activities relevant to using an application. This should help the students see the relevance of knowing about hardware and will help them relate different elements together.

Exercise 4.4.2 Duration 1 hour

1. If you have only a limited understanding of computer hardware then carry out this exercise.

2. Explore how a computer is set up (**make sure that the computer is disconnected from the power before you start**) and take notes of what you find. Draw and label diagrams of the structure identifying the different components.
   a) Trace the cables linking the different components and the different types of connections they plug into (these are called ports).
   b) Using the original documentation open up the computer and observe carefully the set-up inside the box. You should be able to identify the main parts (ie CPU, hard disk, disk drives, motherboard and cards). It is important not to touch any internal components and before you start the process you should discharge any static electricity on your body. This is done by touching a metal filing cabinet and wearing an earth static wrist band.
   c) Retrace your steps and reassemble the box.

3. Record what you learnt in your portfolio.

Operating system

Learners find differentiating between an operating system and application software difficult. This is partially because when you are using an application it is not obvious for new users to know when you are using an application function or an operating system one. You need to help them see the difference from the start of the course so you may well include a brief introduction in the first session.

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Example

Notes

An operating system is a special type of software which manages the work of the computer. It controls how you communicate with the computer from the keyboard and mouse, the storage of information on the hard disk and the running of other software programmes. This computer uses Windows 95 operating system.

Learners need to be able to find their way around the operating system and there are a number of ways to achieve an initial overview. Some options are:

- to use the guides or tours which are supplied with the operating system
- to use computer-based training packages which provide an introduction to an operating system (eg Windows 95)
- to develop a range of exercises to help your learners to explore the operating system.

Operating systems are not easy to understand. You need to provide opportunities throughout the course to develop understanding of the operating system.

Exercise 4.4.3 Duration 30 minutes

1. Explore the various guides and help systems within Windows 95.

2. Reflect on how you could use these functions within a session.

3. Record your conclusions in your learning diary.

Keyboard and Mouse

There is no alternative to using a computer for the student to become a competent user of input devices such as keyboard and mouse. This is essentially about practice and you should aim to give as much time as possible to using both devices. Games such as solitaire which are supplied with Windows 95 allow all the mouse techniques of clicking, double clicking and

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Notes

click and drag to be practised in a non-threatening way. There is no substitute for keyboard skills other than to spend a lot of time entering information into the computer. You will need to provide a range of exercises with different degrees of difficulty for your students to practice with. However, you should encourage them to bring work they would like to use (eg letters).

Applications

It is useful to provide a context for practising mouse and keyboard skills. This allows learners to develop their experience of computer applications while becoming competent in using input devices.

Learners should be given some choice over which applications to work on. The basic choices are likely to be word-processing, painting and drawing, spreadsheets and databases. However, there are some fundamental tasks which you will need to emphasise and provide as many opportunities to practise are:

- locating and loading applications
- saving files
- printing.

These operations are essential to becoming a competent computer user.

Location and loading files should involve all the main approaches (eg double clicking on icons on the desktop, using Start's program list and locating executable files on the hard disk). However, integrate the operation into other work so that the relevance and relation to other operations is clear. If it is possible students should be given the opportunity to load an application on to the system from either floppy disk or CD-ROM or both.

You should provide as many opportunities for saving files as possible and include:

- saving to hard disk
- saving to floppy disk
- transferring files between floppy disks and also between floppy and hard disks
- moving files between folders
- establishing new folders
- naming and renaming files.

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Notes

Printing should include the basic maintenance features of changing paper and cartridges. However, you should allow the students to experiment with different settings for the printer such as:

- landscape and portrait printing
- different resolutions
- print in reverse order
- effects of changing paper size.

Exercise 4.4.4 Duration 1 hour

1. Consider one of the basic functions (eg saving, loading and printing) and how you can provide practice in using this function.

2. Devise a variety of opportunities where learners can practise using this function. Write notes to brief you on how to integrate the function into appropriate exercises.

3. File your notes and reasoning in your portfolio.

Exercise 4.4.5 Duration 3 hours

1. Identify a session you have to carried out or taken part in and consider the content of the session.

2. Consider what was included, how it was introduced to the learners and why.

3. What would you change? Develop an outline of a revised session. Record why you have come to these conclusions.

4. File your design and explanation in your portfolio.

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Section 5. Information Technology Content – 2

Duration: 4 hours

By the end of this section, you should be: *Notes*

- aware of the possible content of a session concentrating on all the main computer applications
- able to select appropriate content.

Setting up in SHAP

Assessment approach

You will be expected to collect evidence of your skill and understanding of this module to form part of your portfolio and learning diary.

Information Technology content

There is a range of basic information technology qualifications available which provide detailed statements of the curriculum required to meet their standards. However, if you are planning your own study programme, we have provided an analysis of the competencies and knowledge required to become computer-literate. We would recommend that you consider the qualifications and standards available from the awarding bodies.

Computer basics

Notes

The learner should be able to:

- start and shut down a computer
- use a mouse to single click, double click and click and drag
- find their way around the Windows operating system including:
  1. starting and closing down applications
  2. manipulating windows (minimise, maximise and close windows)
  3. changing mouse and keyboard settings
- use the keyboard to enter straightforward information into applications
- understand the component parts of a computer (monitor, central processing unit (CPU), keyboard, mouse, drives and printer).
- load CD-ROMs and floppy disks into the correct drives
- understand the difference between hardware and software, application and operating system, and RAM and ROM.

More advanced elements include:

- loading an application from CD-ROM or floppy disks
- understanding the function of a modem
- changing the ink cartridge or toner cartridge in a printer
- clearing a paper jam in a printer safely.

Applications

A computer-literate user should be able to use competently at least one of the main computer applications. The main applications are:

- word-processing
- spreadsheet
- database
- painting and drawing
- Internet/communications
- e-mail
- desktop publishing.

Many basic qualifications are based on achieving competency in one, two or three applications from a selection similar to this list.

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Word-processing

Notes

The learner should be able to:

- start and close down a word-processor program
- create a new document
- open an existing document
- enter text
- understand word wrap
- carry out basic editing functions using delete and back-space keys
- move mouse pointer to chosen points in the document
- use copy and paste, and cut and paste functions
- set margins
- justify text (align text: left, right, centre and full)
- change line spacing
- use bold, italics and underline functions
- change fonts and character sizes
- understand use of undo and redo
- use spellchecker
- use help function
- save document on hard disk or floppy disk or network server
- print document.

More advanced elements include:

- using save as function
- using find and replace to change words and phrases within a document
- understanding what headers and footers are
- changing tool bars
- inserting tables in a document
- using bullets within a document
- numbering pages of a document
- inserting clipart within a document.

Spreadsheet

The learner should be able to:

- start and close down a spreadsheet program
- create a new spreadsheet
- open existing spreadsheet
- enter simple data such as text and numbers

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Notes

- enter basic formula to add, subtract, divide, total row and total column
- change presentation of spreadsheet by inserting extra rows and columns
- change presentation of data by altering font and character size
- use bold, italic and underline functions
- change column width
- use standard functions (eg sum)
- use the help function
- save spreadsheet on hard disk, floppy disk or network server
- print spreadsheet.

Database

The learner should be able to:

- understand what a database is
- start and close down a database program
- open an existing database
- search a database for a specific record or records
- enter information in an existing database
- edit information in an existing database
- save information in an existing database
- print selected records from an existing database.

More advanced elements include:

- understanding what fields, records and files are
- creating a simple database (eg by using a wizard)
- sorting records
- carrying out a mailmerge.

Painting and drawing

The learner should be able to:

- start and close down painting and drawing program
- create a new graphic image
- open an existing graphic file
- edit an existing image using magnifier and pen functions
- use basic functions of rectangle, straight line, curved line, ellipse, rounded corner rectangle and pen to produce a simple image (e.g. a line drawing of a house)

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Notes

- select foreground and background colours from palette
- use copy and paste, and cut and paste functions to modify an image
- use image rotation functions to change orientation of an image
- use help function
- save image on hard disk, floppy disk or network server
- print image.

More advanced elements include:

- changing colour palette
- copying part of an image and saving it as a separate file
- changing attributes of drawing tools including:
  1. line width
  2. brush shapes and sizes
  3. erasure size
  4. filled shapes.

Internet and communication

The learner should be able to:

- understand what the Internet and World Wide Web are
- understand what is required to access the World Wide Web including:
  1. Equipment (eg telephone line, modem, communication software and computer)
  2. Internet Service Providers
- access the Internet using communication software and close down the program
- use a browser to locate and visit a site
- search the World Wide Web to locate sites linked to a chosen field (eg cookery, online shopping and sport)
- use bookmarks and favourites
- understand structure of URLs
- use help function
- print a page from a website.

More advanced functions include:

- using a range of search engines to locate sites linked to a chosen subject
- exploring a website using hyperlinks and jumping between sites

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Notes

- understanding history function to retrace steps to an earlier site visited
- downloading files
- using chat lines
- creating HTML files using a word-processor.

E-mail

The learner should be able to:

- understand the nature of e-mail
- start and close down e-mail program
- send and receive e-mails including:
  1. address
  2. subject
  3. enter message
- reply to a message
- forward a message to another person
- save a message.

More advanced elements include:

- sending a message to multiple addresses
- attaching files to e-mail messages
- taking part in a mail group or a news group
- understanding purpose of in and out boxes
- using address book
- using a standard signature.

Desktop publishing

The learner should be able to:

- start and close down a desktop publishing program
- create a new document
- open an existing publication
- enter or import text into the publication
- use frames
- import clipart
- use copy and paste, and cut and paste functions
- set margins
- justify text (align text: left, right, centre and full)
- change line spacing
- use bold, italic and underline functions

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- change fonts and character sizes
- understand use of undo and redo
- use spellchecker
- use help function
- save publication on hard disk or floppy disk or network server
- print publication.

More advanced elements include:

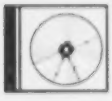
- using save as function
- using tool bars
- using special effects
- manipulating objects (eg rotating)
- using headers and footers
- changing colours
- using text styles.

Exercise 4.5.1 Duration 2 hours

1. Consider the content of a one-day course which is for adults who have no experience of computers and who want a general overview of what a computer can do for them.

2. Choose your content and explain why you have made these choices.

3. Record your decisions in your portfolio.



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DEVELOPING SKILLS FOR INFORMATION TECHNOLOGY TUTORS

Accreditation details

NIACE
THE NATIONAL ORGANISATION FOR ADULT LEARNING

OPEN COLLEGE NETWORK
south east midlands

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SECTION ONE

1. BACKGROUND TO THE DEVELOPING SKILLS FOR INFORMATION TECHNOLOGY TUTORS PROGRAMME

1.1 A GUIDE TO THE HANDBOOK

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1.3 OPEN LEARNING

1.1 A GUIDE TO THE HANDBOOK

This handbook contains information on the Developing Skills for Information Technology programme and the documentation required for the submission of this programme to an Open College Network for accreditation. This Programme has been developed by The National Institute of Adult Continuing Education (NIACE).

The handbook and documentation have been prepared for simultaneous recognition by all Open College Networks.

The programme offers an opportunity for learners to achieve Open College Network credits at Levels Two and Three. It is important to note that it is the Programme and not the supporting pack that is accredited. However, the supporting pack of materials play a key role in supporting the programme and may be purchased directly from NIACE.

The units of assessment, and associated learning outcomes, specified in the programme will be approved by a simultaneous recognition panel. It is a condition of the recognition process that these must not be amended or changed.

Any organisation wishing to offer the programme must, in the first instance, register their interest with, and seek authorisation from, their local Open College Network.

This handbook is intended for the use of course tutors, assessors, moderators, managers in providing institutions and members of National Open College Network (NOCN). Any of the above people or organisations are invited to photocopy any part of the handbook for their appropriate internal use

1.2 INTRODUCTION TO THE PROGRAMME

This programme is the result of work undertaken as part of a European project funded by the Information Society Project Office (ISPO). However, the foundation was laid during investigations into approaches for raising IT awareness amongst adults carried out by NIACE during 1997/98 in partnership with BECTU as part of a contract with the Department for Education and Employment.

NIACE have modified the content and organisation of this programme in the light of feedback received from the pilot run.

Information Technology courses and learning programmes are provided by a wide range of organisations and individuals throughout Great Britain. Events take place in many locations from colleges to community centres, libraries to supermarkets and schools to training centres. The supply of IT courses and

learning opportunities is considerable but probably does not meet the overall demand. There is a national shortage of people with IT skills at all levels. This programme aims to contribute to the solution of these problems through improving the quality of the learning experience by developing the teaching and support skills of tutors.

1.3 OPEN LEARNING

Open Learning is a general term for a number of approaches which are intended to:

- Reduce or eliminate barriers to learning caused by timing of courses, location, entry qualification requirements and structure of courses which keep people from participating in education and training

- Provide a more learner-directed or centred provision in which the learner decides what, where and how the learning will take place.

Open learning allows the learner to take responsibility for their own learning and gives them freedom to study and learn in their own way. This programme has been developed to allow learners to work through it at their own pace, at times which suit them and it requires no prior knowledge or teaching or training experience. However, it does assume that you are involved, or will be involved, in supporting adults who are learning about information technology.

SECTION TWO

2 OPEN COLLEGE NETWORK ACCREDITATION

2.1 A GUIDE TO OPEN COLLEGE NETWORK ACCREDITATION

2.2 REGISTERING FOR ACCREDITATION

2.3 ADDITIONS TO THIS PROGRAMME

2.1 A GUIDE TO OPEN COLLEGE NETWORK ACCREDITATION

2.1.1. Open College Networks (OCNs) are locally controlled and managed accreditation bodies which collectively constitute the National Open College Network (NOCN). They provide a flexible and learner centred accreditation service within a national framework to a wide range of learning, but particularly for those groups whose achievements have not previously been formally recognised. OCNs aim to enhance opportunities for access and progression, particularly for those learners who have traditionally remained outside of academic and vocational award frameworks.

All programmes accredited by member OCNs operate within the National Open College Network framework of accreditation. This framework is based on the accumulation of credits at different levels on unit-based programmes. Credit is awarded to learners for successful completion of units of assessment at four levels prior to HE entry. The NOCN framework operates within the emerging National Credit Framework specifications.

The NOCN framework of credits and levels enables all OCN accredited programmes to be reliably compared and valued in relation to each other. This common framework provides the basis of the NOCN Credit Accumulation and Transfer agreement, which enables credit to be transferred between all member OCNs.

The achievement of OCN credits will enable a learner to consider their potential for progression onto further study. The NOCN framework has established board equivalence with other awards, which allows learners to make an informed decision about progression onto further study. It may also assist with the identification of enhanced standing on some learning programmes and/or accreditation of prior learning against other national qualifications.

* **Credit**
  is used by OCNs to indicate the volume of learning. All OCNs use the same definition of credit value. A credit is awarded for the successful completion of a set of learning outcomes that the average learner can reasonably be expected to achieve in a notional 30 hours of learning. It is important to note that credit is awarded for achievement, not simply for time serving. Once the credit value of a programme is agreed, the amount of time any learner actually takes to achieve the outcomes is irrelevant to the award of credit.

* **Level**
  descriptors are used by OCNs to establish the relative complexity and independence of learning within accredited pro-

grammes. Members of NOCN use the following level descriptors:

Entry Level. The acquisition of a range of initial skills, knowledge and understanding in highly structured and self-referenced contexts which permit the identification of progression from the learner's point of entry to the learning process.

Level One

The acquisition of a foundation of competencies, knowledge and understanding in a limited range of predictable and structured contexts that prepare the learner to progress to further achievements.

Level Two

The acquisition of a broader range of competencies, knowledge and understanding which demonstrate the extension of previous abilities in less predictable and structured contexts and prepare the learner to progress to further achievements.

Level Three

The acquisition of a more complex range of competencies, knowledge and understanding in contexts which prepare that prepare the learner to progress to further independent achievements.

NOCN levels enable broad equivalencies with other awards to be developed. For example:

Entry	=	Parts of Wordpower and Numberpower
One	=	NVQ1, Foundation GNVQ
Two	=	NVQ2, GCSE, Intermediate GNVQ
Three	=	NVQ3, A Level, Advanced GNVQ

It is fairly common for an OCN programme to be made up of units at more than one level, and for learners on that programme to achieve different numbers of credits at different levels, depending on their needs and achievements.

2.2 REGISTERING FOR ACCREDITATION

This programme has been through an appropriate validation process and has recognised status with all members of the National Open College Network. The registration process is an important part of Quality Assurance to ensure a consistency of delivery across organisations and regions. To register the

programme with your local OCN, in order that credit can be awarded to learners, it will be necessary to go through the following process:

Stage 1: Make sure you are authorised to run the programme, i.e.'approved' centre status has been given by NIACE after discussion on use of teaching materials to support open learning.

Stage 2: Read the document carefully and check that you are able to deliver and support the programme according to the specifications set out in other sections of the document.

Stage 3: Contact your local OCN to seek guidance as to the exact details of the registration process.

Stage 4: Confirmation of programme registration will be received from your local OCN and details of learner registrations and moderation will be finalised.

2.3 ADDITIONS TO THE PROGRAMME

After successfully completing the registration process, it will be possible for a Centre to offer the Developing Skills for Information Technology Tutors Programme. Proposals for additional units should be developed in consultation with NIACE.

SECTION THREE

3 PROGRAMME STRUCTURE AND MANAGEMENT

3.1 INTRODUCTION

3.2 PROGRAMME INFORMATION

3.1 PROGRAMME INFORMATION

This document is a submission to Open College Network South East Midlands for recognition of the Developing Skills for Information Technology Tutors Programme.

The main aim of this programme is to enable adults who are delivering IT training to develop skills in tutoring and supporting learners. It has been designed to facilitate an Open Learning approach in order to offer those opportunities to learners in the most flexible manner possible. However, centres may choose to deliver the programme in other ways, to meet the needs of their learners, providing that the minimum quality standards are met.

In the rest of this submission we outline the content of the Developing Skills for Information Technology Tutors Programme and the requirements for centres wishing to offer the programme.

3.2 PROGRAMME INFORMATION

1 **Programme Code:**
GC2\01\99\0491

2 **Programme Title:**
"Developing Skills for Information Technology Tutors"

3. **Rationale for Programme**
The 'Information Society' is quickly developing from an idea into a reality for many people. The expanding use of Information Technologies (IT) promises many benefits. However, it also brings with it the risk of marginalisation and social exclusion. To maximise the benefits and minimise the risks of IT, it is vital that people have access to the technologies and are skilled users of those technologies.

This programme is designed to provide IT Tutors with the opportunity to acquire basic training in and understanding of planning, delivery and methods of teaching with specific reference to IT. It acknowledges the numbers of tutors who are used to deliver IT but who do so with little or no formal training or qualifications.

4. **Aims of the Programme**
The programme aims to equip IT tutors, who have little or no other formal training, with the necessary skills and knowledge for improving their ability to support learners. It also aims to maximise the benefits and minimise the risks of IT as explained above.

Through its use and promotion of open learning techniques it also aims to improve the quality of the learning experience for IT tutors.

5. **Target Group**

This programme is aimed at Information Technology Tutors either paid or voluntary who have received little or no formal training in teaching techniques and skills. It is targeted at those who are already working with learners or who are intending to become IT tutors.

It is suitable for tutors working in the community, for voluntary groups and organisations as well as those in more formal education and training settings.

It should also be potentially beneficial to individuals who are returning to tutoring after a break and wish to refresh their skills and knowledge. Staff who are providing technical support and who are seeking to play a wider role in supporting learners should also find it beneficial.

6. **Recruitment and Selection**

Learners selected on to the programme will normally be expected to have:

- access to an existing group of learners in IT for a minimum of 6 teaching sessions
- an interest in developing the skills and knowledge to become a more effective tutor

The providing institution will be responsible for the recruitment and selection of learners on to the programme. Recruitment will be through normal centre publicity using a combination of internal and external marketing strategies.

All information leaflets and publicity will give a clear outline of the programme and its requirements.

All potential recruits to the programme will be offered the opportunity to discuss the suitability of the programme to their personal needs and skills with a member of the course team.

> Outline the local arrangements and practices for recruitment and selection. You may wish to provide copies of publicity materials.

7. **Learner Support**

In order to participate in the programme learners will be encouraged to use and have access to:

- a modern computer environment e.g. Windows 95 and technical support to enable any technical problems experienced by their students to be quickly overcome.

- an appropriately qualified professional trainer/teacher to offer adequate tutorial support and guidance.
- The programme is designed so that learners may study at a location, time and pace suited to their needs.
- Support and advice on appropriate progression and further training opportunities will be made available either through the centre's own advice and support systems or through referral to outside agencies.
- The resource centres, libraries etc. that are available within the centre
- Providing institutions should contact NIACE for further information.

Outline the on course support provided in your centre.

6. **Progression**

This programme will give learners the skills and knowledge necessary to become more effective Information Technology tutors. These will enable learners to progress to a range of further training opportunities and national qualifications dependent on their level of prior experience and qualifications these might include City & Guilds 730, B.Ed., PGCE.

Outline the specific opportunities available for progression after successful completion of this programme.

7. **Programme Structure**

The programme provides tutor training through an Open Learning approach. This was chosen to maximise the potential use of the material and avoid the barriers of a fixed training location, set times of attendance and designated methods of delivery. Learners will be engaged in approximately 240 hours of study if they complete the whole programme. However, they may also be guided into particular combinations of units dependent on their personal needs.

Whilst this course is designed primarily for open learning it is possible to use a combination of other modes of delivery including guided learning hours.

8. **Programme Management**

Centres will ensure that all staff are appropriately qualified and/or experienced in teaching. It is expected that all staff should possess either a teaching qualification or an assessor's award such as D32/33. Staff should be familiar with OCN methodology and possess the skills necessary to provide the support required for an open learning approach

The course leader will have responsibility for the management and co-ordination of assessment and will produce the evaluation reports required by their local OCN.

Identify the programme management arrangements that apply to your centre

9 Quality Assurance and Moderation

The programme will be subject to established quality assurance procedures within the providing institution. These should include:

- Regular meetings of staff involved in delivery
- Learner evaluation forms
- End of programme evaluation review with tutor and learner
- Sessional or annual reviews involving tutor(s) and managers(s) of programme

Results of this process of evaluation should be contained within the Annual Report required by the local OCN. Any suggestions for improvement, concerns about the structure of the programme or suggestions for additional units of assessment should be notified to NIACE.

Outline the centre's procedures and arrangements for the monitoring and review of the programme. Details should be given of the meetings, reporting mechanisms etc. Which form part of the provider's quality arrangements.

The process of moderation will be agreed with the local OCN. This will include:

- Agreeing a system of internal verification which ensures the consistency in the application of credit level and credit value.
- The appointment of an external moderator to audit the internal procedures agreed above and to approve recommendations for the award of credits.

Describe the procedures for internal verification of learner achievement which operate in your centre. These should be discussed and agreed with your local OCN.

Each providing institution will be required to have an equal opportunities policy which demonstrates a commitment to and a promotion of, strate-

gies to widen participation and remove discriminatory practices and procedures.

Give details, or examples, of how this programme is supported by or relates to your centre's equal opportunities policy.

Each providing centre will be required to have a Health and Safety policy designed to meet statutory requirements and promote mutual responsibility for the Health and Safety of all members.

A copy of the Health & Safety policy should be lodged with the local OCN.

SECTION FOUR

4. PROGRAMME DELIVERY AND ASSESSMENT

4.1 CONTENT AND DELIVERY

4.2 METHODS OF ASSESSMENT AND EVIDENCE OF ACHIEVEMENT

4.3 SUMMARY OF UNITS

4.1 CONTENT AND DELIVERY

The programme is designed to operate alongside the tutor's IT work. The material requires the tutor to undertake a variety of practical tasks related to supporting learning such as planning and preparing sessions, practising different teaching strategies, devising a short course of IT sessions appropriate for adult learners and producing of teaching materials. Learners will also be required to reflect on their own performance, previous experience and the needs of learners.

The intention is that the tutor should be able to combine the learning with their IT tutoring activities. This should provide many opportunities to incorporate new ideas directly into courses and programmes as the tutor interacts with the programme and supporting materials.

Centres will have to provide access to a modern computer environment and give learners guaranteed access to a minimum of 6 sessions to enable them to complete all units of assessment. Technical support and tutorial/assessor support must also be available.

Give details of the learning strategies that will be used in your centre.

The main content of the programme is contained within the pack of materials produced by, and available from, NIACE. Providing institutions should use these materials unless otherwise agreed with NIACE.

Give details of any modifications to the content of the programme materials.

4.2 METHODS OF ASSESSMENT AND EVIDENCE OF ACHIEVEMENT

As the programme is designed to be delivered primarily through Open Learning, methods of assessment and evidence of achievement required for moderation will be geared towards the needs of learners on this programme who will not necessarily have much class contact with tutors. It is not expected that the learners will be required to generate academic, written essays but rather engage in a range of practical tasks on which they will be assessed.

The methods of assessment will vary locally but will follow the basic principles below:

- Observation of taught/delivered sessions by experienced and qualified assessors/teachers. Self assessment and assessor feedback.
- Reflective log in which learner records own responses to learning situations and discusses or evaluates those responses and impact on own delivery strategies.
- Production of session plans setting out clearly identified aims and objectives relevant to delivering IT to a group of adult learners. Self and tutor assessment.
- Production of learning materials to support their sessions which are appropriate to both content and students. Self and tutor assessment
- Design of a structured short course of IT sessions relevant to adult learners. Self and tutor assessment

Give details of any variations to methods of assessment that operate in your centre.

Learners are required to maintain an ongoing record of achievement showing how they have satisfied the learning outcomes and criteria for each unit of assessment. They must also keep all coursework, including personal, reflective notes/log, examples of practical work and produced learning materials in an organised and coherent file to provide supporting evidence of their achievement. Evidence should be presented in a manner that makes it clear which unit and criteria for assessment it relates to.

Give details of how assessment will be organised and managed in your centre.

4.3 SUMMARY OF UNITS

The units offered in this programme are listed below.

Planning and Delivering an Initial IT Session	Level Two	2 Credits
Planning and Delivering an Initial IT Session	Level Three	2 Credits
Facilitating Learning	Level Two	2 Credits
Facilitating Learning	Level Three	2 Credits
Designing and Delivering an IT Course	Level Two	2 Credits
Designing and Delivering an IT Course	Level Three	2 Credits
Teaching Methods and IT	Level Two	2 Credits
Teaching Methods and IT	Level Three	2 Credits

PART 4B: UNIT DETAILS OCNSEM

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UNIT CODE: EM

4.4 UNIT TITLE

PLANNING & DELIVERING AN INITIAL IT SESSION

4.5 CREDIT LEVEL
TWO

4.6 NO. OF CREDITS **2**

4.7 OUTCOMES	4.8 CRITERIA FOR ASSESSMENT
The Learner should be able to:	The Learner has achieved the learning outcome because he/she can:
1. Understand how adults might feel when they first use a computer	1.1 Critically discuss reactions and feelings of adults attending his/her first IT session with them
2. Plan an initial IT session that is appropriate for adult learners	2.1 Plan and prepare suitable exercises and support materials for an initial session 2.2 Describe and comment on at least 2 different strategies that can be used to develop learners' confidence
3. Be able to prepare a session that helps their students develop some structural IT knowledge	3.1 Compare and contrast structural and functional knowledge with reference to IT 3.2 Design or explain an exercise that enables learners to develop structural understanding
4. Know how to adapt a location not normally intended for adult learning into a suitable environment for the delivery of an IT session	4.1 Assess the suitability of any one location for delivering an IT session identifying required changes 4.2 Carry out a health and safety assessment of any room that they use for IT sessions
5. Reflect on own approach to planning and delivering an initial IT session	5. Comment on own strengths and weaknesses with regard to the planning and delivery of an initial IT session

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PART 4B: UNIT DETAILS OCNSEM

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UNIT CODE: EM

4.4 UNIT TITLE

PLANNING & DELIVERING AN INITIAL IT SESSION

4.5 CREDIT LEVEL
THREE

4.6 NO. OF CREDITS **2**

4.7 OUTCOMES	4.8 CRITERIA FOR ASSESSMENT
The Learner should be able to:	The Learner has achieved the learning outcome because he/she can:
1. Understand how adults might feel when they first use a computer	1.1 Critically discuss reactions and feelings of adults attending his/her first IT session with reference to own experience
2. Plan and deliver an initial IT session that is appropriate for adult learners	2.1 Plan, prepare and use exercises and support materials that are suitable for an initial IT session 2.2 Describe and evaluate different strategies that they have used to develop learners' confidence
3. Be able to prepare a session that helps their students develop some structural IT knowledge	3.1 Assess the relative importance of structural and functional knowledge with reference to IT 3.2 Design and evaluate at least two exercises to enable learners to develop structural understanding
4. Know how to adapt a location not normally intended for adult learning into a suitable environment for the delivery of an IT session	4.1 Assess the suitability of any one location for delivering an IT session identifying required changes 4.2 Carry out a health and safety assessment of a room they use for IT sessions explaining how they would eliminate hazards
5. Reflect on own approach to planning and delivering an initial IT session	5.1 Assess the strengths and weaknesses of their own approach to the planning and delivery of an initial IT session 5.2 Identify areas for improvement in own performance

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PART 4B: UNIT DETAILS OCNSEM

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4.4 UNIT TITLE

FACILITATING LEARNING

4.5 CREDIT LEVEL
TWO

4.6 NO. OF CREDITS
TWO

4.7 OUTCOMES	4.8 CRITERIA FOR ASSESSMENT
The Learner should be able to:	The Learner has achieved the learning outcome because he/she can:
1. Understand the different ways in which adults learn	1.1 Identify and describe the key features of at least two the main learning styles with reference to specific learners in their current teaching group 1.2 Explain how they would cater for these different learning styles in their teaching sessions 1.3 Plan sessions that take account of the particular problems faced by some older learners
2. Devise strategies to deal with these differences that are appropriate for IT sessions	2.1 Describe at least two different teaching methods that are appropriate to the delivery of IT training 2.2 Explain reasons for choice of preferred teaching method
3. Understand why feedback is essential to the learning process and be able to give appropriate feedback	3.1 Explain why constructive feedback is of value 3.2 Describe how they have provided feedback to at least two different types of learners.
4. Understand the importance of environment to learning	4.1 Explain the effects that environment can have on learners 4.2 Describe what they have done to create a friendly, supportive learning environment in the context of an IT session
5. Accommodate the needs of mixed ability learners in the design and delivery of an IT session	5.1 With reference to any one IT topic, explain how they would vary the design and delivery of the session to accommodate the needs of learners of different abilities. 5.2 Identify the potential effects of conducting an IT session at the same pace for all learners

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PART 4B: UNIT DETAILS OCNSEM

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UNIT CODE: EM

4.4 UNIT TITLE

FACILITATING LEARNING

4.5 CREDIT LEVEL
THREE

4.6 NO. OF CREDITS
TWO

4.7 OUTCOMES	4.8 CRITERIA FOR ASSESSMENT
The Learner should be able to:	The Learner has achieved the learning outcome because he/she can:
1. Understand the different ways in which adults learn	1.1 Critically discuss the key features of at least two main learning styles with reference to specific learners in their current teaching group 1.2 Assess different teaching strategies that they could use to accommodate these different learning styles 1.3 Identify potential problems faced by older learners
2. Devise strategies to deal with these differences that are appropriate for IT sessions	2.1 Produce a glossary of the most commonly used IT words and/or acronyms 2.2 Evaluate different teaching methods with reference to the delivery of IT training 2.3 Assess the advantages and disadvantages of their own preferred teaching method
3. Understand why feedback is essential to the learning process and be able to give appropriate feedback	3.1 Assess the value of feedback to the learner 3.2 Describe how they have provided constructive feedback to different types of learners and evaluate its impact
4. Understand the importance of environment to learning	4.1 Assess the effects that environment can have on learners 4.2 Describe what they have done to create a friendly, supportive learning environment for an IT session 4.3 Assess the advantages and disadvantages of workshop delivery
5. Accommodate the needs of mixed ability learners in the design and delivery of an IT session	5.1 Evaluate different ways of varying the design and delivery of IT sessions to accommodate the needs of learners with different levels of ability. 5.2 Assess the potential effects of conducting an IT session at the same pace for all learners and the impact this may have on learners.

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PART 4B: UNIT DETAILS OCNSEM

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UNIT CODE: EM

4.4 UNIT TITLE

DESIGNING AND DELIVERING AN I.T. COURSE

4.5 CREDIT LEVEL
TWO

4.6 NO. OF CREDITS
TWO

4.7 OUTCOMES	4.8 CRITERIA FOR ASSESSMENT
The Learner should be able to:	The Learner has achieved the learning outcome because he/she can:
1. Plan a series of I.T. sessions	1.1 Decide aims and objectives for at least 2 separate sessions 1.2 Plan these sessions to cover selected aspects of computer hardware, operating systems and applications and enable learners to use them
2. Prepare written lesson plans	2.1 Produce a simple session plan that caters for the needs of different learners and includes a range of different activities 2.2 Carry out the session using the session plan
3. Produce a range of materials to support the sessions	3.1 Prepare at least one visual aid to support a session that is relevant to the learners' needs. 3.2 Use both a traditional and an interactive handout on a given topic. 3.3 Comment on the materials they have used and suggest areas for improvement
4. Reflect on and modify sessions or delivery	4.1 Comment on the session plan used and suggest ways in which the structure and delivery could be improved

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PART 4B: UNIT DETAILS OCNSEM

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UNIT CODE: EM1

4.4 UNIT TITLE

DESIGNING AND DELIVERING AN I.T. COURSE

4.5 CREDIT LEVEL	4.6 NO. OF CREDITS
THREE	**TWO**

4.7 OUTCOMES	4.8 CRITERIA FOR ASSESSMENT
The Learner should be able to:	The Learner has achieved the learning outcome because he/she can:
1. Plan a series of I.T. sessions	1.1 Decide aims and objectives for a series of sessions that follow a logical sequence and fit the time available 1.2 Plan these sessions to cover selected aspects of computer hardware, operating systems and applications and enable learners to use them.
2. Prepare written lesson plans	2.1 Produce a detailed session plan that caters for the needs of mixed ability learners, includes a range of different activities and can be delivered with available resources 2.2 Carry out the session, making adjustments where necessary, to accommodate learners' needs
3. Produce a range of materials to support the sessions	3.1 Prepare at least two different visual aids to support one session that are relevant to the learners' needs and produced to a professional standard. 3.2 Prepare and use both a traditional and an interactive handout on a given topic. 3.3 Evaluate the materials they have produced 3.4 Suggest areas for improvement in the light of learner feedback
4. Reflect on and modify sessions and or delivery	4.1 Evaluate the extent to which session plans and delivery met the desired aims and objectives 4.2 Using learner feedback modify and improve either the structure or delivery of at least one session

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4.4 UNIT TITLE

TEACHING METHODS AND IT

4.5 CREDIT LEVEL
TWO

4.6 NO. OF CREDITS **2**

4.7 OUTCOMES	4.8 CRITERIA FOR ASSESSMENT
The Learner should be able to:	The Learner has achieved the learning outcome because he/she can:
1. Understand the value of one to one support and be able to use it appropriately when delivering an IT session	1.1 Identify why it is important to offer support to learners who are working on their own 1.2 Describe how they have used a range of techniques to provide one to one support when delivering an IT session
2. Understand how to present IT content, tasks or techniques as a series of logical steps in order to facilitate one to one instruction	2.1 Present any one piece of coherent learning as a series of logically sequenced steps/tasks
3. Understand the potential effects that group size can have on learning	3.1 Describe the different effects that being in both a large and small group might have on the behaviour of the group and on the learning experience of individuals 3.2 Identify key features of at least two different teaching strategies that might be used to optimise learning in large and small groups
4. Understand the value of and be able to use whole class teaching in delivering IT sessions	4.1 Describe the advantages and disadvantages of whole class teaching in relation to IT 4.2 Plan and prepare a 20 minute talk for a whole class on any one IT topic
5. Understand the value of and be able to give IT demonstrations	5.1 Identify any one advantage or disadvantage of using demonstrations in relation to IT 5.2 Prepare and carry out a demonstration on any one relevant IT task

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PART 4B: UNIT DETAILS OCNSEM

For OCN Office Use Only:
UNIT CODE: EMI

4.4 UNIT TITLE

TEACHING METHODS AND IT

4.5 CREDIT LEVEL
THREE

4.6 NO OF CREDITS **2**

4.7 OUTCOMES	4.8 CRITERIA FOR ASSESSMENT
The Learner should be able to:	The Learner has achieved the learning outcome because he/she can:
1. Understand the value of one to one support and be able to use it appropriately when delivering IT	1.1 Assess the value of offering appropriate support to learners who are working on their own 1.2 Evaluate their own use of a wide range of techniques that comprise one to one support
2. Understand how to present IT content, tasks or techniques as a series of logical steps tin order to facilitate one to one instruction	2.1 Systematically analyse at least two different piece of learning and present to student as a series of logically sequenced steps/tasks
3. Understand the potential effects that group size can have on learning	3.1 Assess the effects that being in both a large and small group might have on the behaviour of the group and on the learning experience of individuals 3.2 Evaluate key features of at least two different teaching strategies that might be used to optimise learning in large and small groups
4. Understand the value of and be able to use whole class teaching in delivering IT sessions	4.1 Assess the value of whole class teaching 4.2 Plan, prepare and deliver a 20 minute talk for a whole class on any one IT topic 4.3 Comment on how the talk was received and own feelings about using this method
5. Understand the value of and be able to give IT demonstrations	5.1 Assess the value of using demonstrations in relation to IT 5.2 Prepare and carry out a demonstration on any one relevant IT task

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